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AN
ESSAYS
ON THE
DROPSY,
AND ITS
DIFFERENT SPECIES.

By DONALD MONRO, M.D.
PHYSICIAN to his MAJESTY'S ARMY, and to
ST. GEORGE'S Hospital.

THE THIRD EDITION.

L O N D O N :

Printed for A. MILLAR, D. WILSON, and T. DURHAM,
in the Strand ; and T. PAYNE, at the Mews-Gate.
M D C C L X V.



T O

Dr. Alexander Monroe, *Senior*

FELLOW of the ROYAL COLLEGE
of PHYSICIANS,

A N D

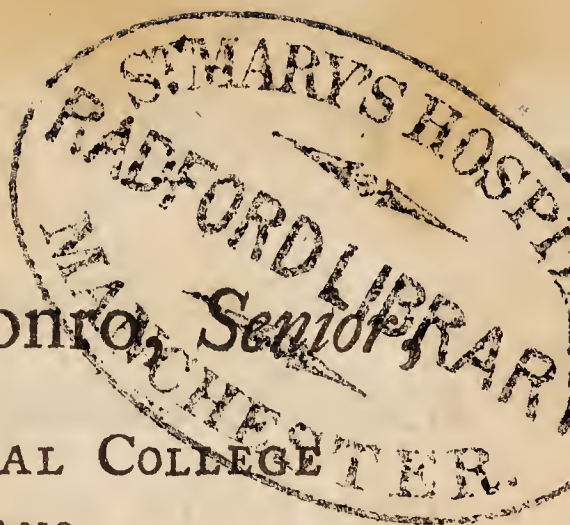
PROFESSOR of ANATOMY in the University
of EDINBURGH.

S I R,

PERMIT me to acknowledge, in this public Manner, that all a Son can owe to the best of Fathers, a Pupil to his Tutor, or a Man to his Friend, I owe to you ; and give me Leave to assure you, that,

A 4

as



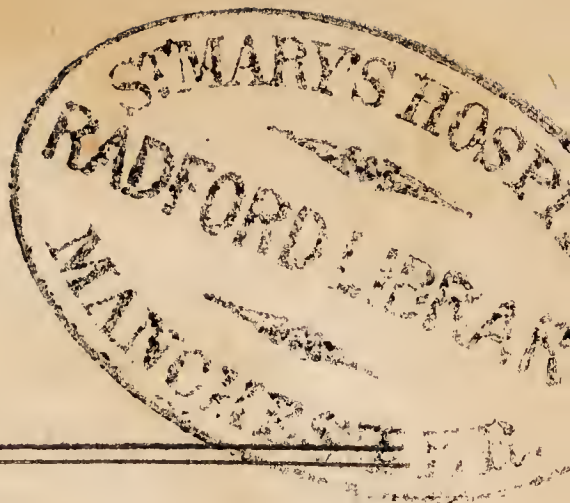
DEDICATION.

as I am every Day sensible of the Advantages I derive, not only from your early Care, but from your Generosity and Example, so it shall be my Endeavour, by every Return of Gratitude in my Power, to approve myself

Your dutiful

and affectionate Son,

D. MONRO.



P R E F A C E.

TH E following Sheets are presented to the Public on a Presumption that they may be serviceable. The Author, at least, is not conscious of having maintained any Opinion through Prejudice, of asserting any Fact without Authority, or of having followed any other Guide than Reason and Experience.

The first Sketch of this Essay was originally wrote in the Year 1748, and designed for a small Circle of Friends, who weekly submitted to each others Examination their Thoughts on the different Diseases of the human

man Body. As it happened to meet with their Approbation, the Author frequently revised it, and from Time to Time added such Observations as occurred to him.

In the Year 1752, when he was a Candidate for a Degree in the University of *Edinburgh*, he digested his scattered Observations with greater Accuracy, and made them public in a Form no otherwise differing from the present, than that the Language was *Latin*, and the Plan more confined.

The first Part of this Essay contains the general Doctrine concerning Dropsies; in which the Seat and Nature of this Disease, the Symptoms observable, and the different Causes, are considered; the Circumstances from which the Event may probably be foretold are pointed out, and the proper Indications of
Cure

Cure are laid down, with the Method of executing each.

In the second Part, which treats of the different Species of the Disease, the same Order is observed as in the former.

As the Knowledge of the latter Parts depends on what has preceded, the whole is divided into Sections, to which Numbers are prefixed; so that by referring to these, Repetitions are avoided.

The first Edition of this Essay was published in the Year 1755, the second in the Beginning of 1756, since which Time the Author has made many Additions and Corrections, and by a careful Attention to the numerous Cases which have occurred to him in the Course of his Practice in large Hospitals, by observing the Effects of the different Medicines which
have

have been proposed for the Cure of dropfical Disorders, and by conversing with other Physicians of extensive Practice, has endeavoured to render this Essay more compleat and useful.

N. B. *The Histories of Cases marked thus * * are Abstracts from the Notes of a Physician justly esteemed for his Knowledge in his Profession, but who desired that his Name might not be mentioned.*

C O N-

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ERRATA CORRIGENDA.

- Page 4, line 4, for υδρογλωσσον, read υδρογλωσσον.
- 24, 19, for *sometime*, read *sometimes*.
- 56, 3, for *watery Liquor*, read *watery Liquors*.
- 83, 18, for *severals*, read *several*.
- 104, 23, for *he was able to lie down*, read *he lay down*.
- 161, 17, after *broad shouldered Trocar*, add *of a particular Make*.
- ibid. 19, for *covered its Orifice*, read *stopt the End of the Tube with a Dossil, and put a sticking Plaster over its Orifice*.
- 188, 21, for *solem*, read *solum*.
- ibid, 22, for *ille patiuntur*, read *illi patiuntur*.
- 197, 17, for *laxeture*, read *laxetur*.
- 204, 20, for *Almond and Emulsion*, read *Almond Emulsion*.
- 208, 16, for *relinquinda*, read *relinquenda*.
- 218, 18, for *feted*, read *fetid*.
- 220, 15, for *Enquiries*, read *Inquiries*.



O F

DROPSIES.

1. **T**HE Cavities of an animal Body, however empty they may appear after Death, are all of them during Life filled either with Fluids, or with solid Substances, or with both; and their Sides, which are composed either of Bones, Cartilages, Ligaments, Membranes, or Muscles, have a constant Pressure to sustain from the Bulk, Weight, or Rarefaction of their Contents.

2. The Cavities are of four different Kinds.

1. Those in which the Blood, and other Liquors of the Body circulate; such as the Heart, Arteries, Veins, and other Vessels. 2.

Those which receive the Liquors secreted from

B

the

the common Mass of Blood, in order to convey them out of the Body, or to deposit them in some larger Cavity; such as the Alimentary Canal, the Windpipe, the Gall and Urinary Bladders, the Uterus. 3. Those Cavities which have Liquors deposited in them by the Exhalant Arteries, and from which there is no other Egress but by the absorbent Veins; such are the cellular Membranes, the Ova in the Ovarium. 4. Those that contain other Organs; as the Head, Thorax, Abdomen, Scrotum, and Capsulæ of the Joints. All of this last Species have their internal Surface constantly moistened with fine thin Liquors thrown out from the Orifices of numerous Arteries, to be taken up again by the like Extremities of absorbent Veins (*a*).

3. The

(*a*) Formerly Branches of the Veins carrying red Blood, were believed to open into the Cavities, and to perform the Office of Absorbents; but we now know from certain Experiments, that the valvular lymphatic Veins are a System of absorbent Vessels, and distributed through the whole human Body; and it is even doubted whether any other Vessels but they, and the lacteals, act as Absorbents. Some Experiments have been brought to support this last Opinion, while

3. The Fluids contained in the first, and the greater Part of the second Species of Cavities, being composed of various heterogeneous Particles endued with different Properties, give Rise to innumerable Distempers. But a few of the second, and all the third and fourth Kind of Cavities, abound with thin watery Liquors, which, when collected in more than the ordinary natural Quantity, cause the Disease called *ὑδρω.*† by the *Greeks*, and from thence named *Dropsy (b)* by the *English*; the *Phænomena*,
Causes,

while those of eminent Authors should seem to prove that the Extremities of red Veins assist in this Office.

(b) Dropsy is a Corruption of the Greek word *ὑδρω.*†, derived from *ὑδωρ* *Water*.

From this Word *ὑδωρ*, compounded with the Name either of the diseased Part, or of the Quality of the extravasated Liquor, or of the Name of something which the tumified Part was thought to resemble, were formed the Greek Names of the different sorts of Dropsies: Thus,

Hydrocephalus, *ὑδροκεφαλός*, or *ὑδροκέφαλον*, *Dropsy of the Head*, from *ὑδωρ*, and *κεφαλή* the *Head*.

Hydrophthalmia, *ὑδροφθαλμία*, *Dropsy of the Eye*, from *ὑδωρ*, and *οφθαλμός* the *Eye*.

Causes, and different Kinds of which, with the Prognosis and Method of Cure, are the Subject of this Essay.

Hydroglossum, ὑδρογλωσσον, *Dropsey of the Tongue*, from ὑδωρ, and γλωσσα *the Tongue*.

Hydrarthron, ὑδραρθρον, *Dropsey of a Joint*, from ὑδωρ, and αρθρον *a Joint*.

Hydromphalum, ὑδρομφαλον, *Dropsey of the Navel*, from ὑδωρ, and ομφαλος *the Navel*.

Hydrocardia, ὑδροκαρδια, *Water in the Pericardium*, from ὑδωρ, and καρδια *the Heart*.

Hydrocele, ὑδροκηλη, *any sort of watery Tumor*, but by Custom confined to signify only Collections of Water in the Scrotum, from ὑδωρ, and κηλη *a Tumor*.

Hydrops Anasarca, ὑδρω† ανασάρκα, *a Dropsey among the Flesh*, from ανα, *between or among*, and σαρξ *Flesh*.

Hydrops Leucophlegmatia, λευκοφλεγματια, from λευκον *white*, and φλεγμα *Phlegm*.

Hydrops Ascites, ασκίτης, *Dropsey of the Belly*, from ασκος, *a Bottle*, the Belly, when distended with Water, being thought to resemble a full Bottle.

PART I.

OF THE

DROPSY

IN GENERAL.

SYMPTOMS.

4. **T**OO great a Quantity of watery Liquors collected in a Cavity distends its Sides, and enlarges its Size, presses on the surrounding Parts, disturbs their Functions, and gives an uneasy Sense of Weight to the Patient.

5. These Symptoms appear sooner or later, are milder or more severe, in proportion to—

6 . OF THE DROPSY.

1. The greater or less Force with which the Sides of the Cavity containing the Water resist the Distention.—2. The faster or slower Repletion of the Cavity by the extravasated Liquor.—3. The Degree of Sensibility in the Sides of the distended Cavity.—4. The Usefulness, &c. of the neighbouring Organs.

6. Limpid Water will not of itself change the Colour of the Parts in which it is contained; and therefore Dropfical Parts which Light can pervade, when viewed between the Eye and a bright Light, appear pellucid. But as the Water of Dropsies is not always pure (c), the want of Pellucidity must not be taken for a certain Sign that the Disease is not a Dropsy.

7. Water collected in a soft Part yields to the Touch, and may be felt fluctuating; but

(c) I have often seen it of a greenish, a brown, or a bloody Colour: sometimes also it resembles Milk, of which see Histories in *Bassii Obs. Med. dec. 2. obs. 7.*---*Hist. de l'Acad. des Sciences, 1700 & 1710.*

when

when the Sides of the Cavity in which it is collected are thick, or of a rigid Texture, or are very full and greatly distended, or when the Quantity of the contained Water is very small, this undulatory Motion of the Fluid is scarce perceptible.

8. When the thinner Parts of the Water so collected are absorbed by the Veins, the Remainder grows thick, acquires a mucous or gelatinous Consistence, and the Disease then puts on a different Appearance (*d*).

9. The Organs macerated in this hydropic Fluid become soft, lax, and weak.—If the Water turns acrid it corrodes the neighbouring Parts, and some of its acrid Particles being absorbed and mixed with the Blood bring on

(*d*) Histories of Hydatides, gelatinous, steatomatous, and other Tumours found in the Ovarium. *Nuck. Adenograph. cap. 8.* and *Philosoph. Transf. No. 466. sect. 4.*—Thick gelatinous Matter among the Muscles, with a large hydropic Sac adhering to the Womb. *Ephem. German, 1742, obs. 94.*—Jelly in the Abdomen. *Barbette Prax. p. 169.*

8 OF THE DROPSY.

Fevers, Convulsions, and other Symptoms of acrid circulating Fluids: hence we see how Dropsies may produce many other Disorders.(e).

10. Hydropical Waters, by their Pressure on the Vessels near them, must obstruct more or less the Course of the Blood, particularly in the Veins; and therefore, when this Pressure affects any considerable Vessels, the Heart and Lungs are in danger of being gorged with too much Blood; especially when the Motion of the

(e) The Surface of the Heart and Pericardium is often eroded by Water contained in this last named Cavity, of which see Examples in *Act. Hafniens. vol. 1. obs. 89. Fran. Sylvii. Prax. Med. lib. 1. cap. 26. sec. 26.*—The Diaphragm has been perforated by the Erosion of Water contained in a Cyst in the Thorax. *Act. Hafniens. vol. 2. obs. 16.*---The Water of an Ascites became so acrid and corrupted, that when it was let out after Death, it produced Symptoms equal to those proceeding from a Pestilential Vapour, the Person who let it out fell into a Putrid Fever, and angry Pustules arose from every Part of his Hands or Fingers on which the least Drop of the Water had fallen. *Philosoph. Trans. No. 454. sect. 4.*---In almost all ascitical Bodies we find more or less of the Intestines inflamed or corroded by the Water.

Fluids

Fluids is accelerated by Exercise, Fever, stimulating Food, or the like Causes. Hence the Dyspnea and frequent Cough of many hydroptic People (*f*), and the more than ordinary Size of the Heart observed in the Dissection of such (*g*).

C A U S E S.

11. Many and various are the Causes of Dropsies, the principal of which are the following.

12. A Weakness and Laxity of the Fibres: for when the Vessels do not act with sufficient Force, the Fluids become of a watery Consistence, and the Orifices of the exhaling Arteries being too weak, allow a greater Quan-

(*f*) I cannot assert, as many Writers have done, that Dropsies are always attended with Dyspnea and Cough; for daily Experience shews us that several Species and Degrees of Dropsy occasion neither of these Symptoms.

(*g*) Many Observations of the large Size of the Hearts of those who died of Dropsies may be read in *Bonet. Sepulchret. Anat. lib. 2* & *3*.

tity

tity of Liquors than ordinary to pass through them, while the absorbent Veins being weakened in at least an equal Proportion, do not take up so much as they were wont to do.

This Weakness may be brought on by many different Causes: for Example, by any great Evacuation, especially by Bleeding (*h*); by a moist Climate (*i*); by an unactive sedentary

(*h*) A subcutaneous Dropsy occasioned by the menstrual Discharge continuing too long. *Forest. lib. 19. obs. 35.*—By Vomiting of Blood. *Ibid. obs. 42.*—Two Histories of the like Disease from frequent and long Bleeding at the Nose. *Schenk. Obs. lib. 3. de Hydrope, obs. 9.*—A Dropsy from pissing of Blood. *Ibid., obs. 12.*—Two Dropsies occasioned by too frequent letting of Blood. *Miscellan. Curios. Acad. Nat. Curios. dec. 2. ann. 2. obs. 169.*—By Loss of Blood on opening Vessels under the Tongue. *Ibid. anno 10. obs. 34.*—One from a Flooding after an Abortion in the third Month. *Hoffman. Oper. tom. 3. cap. 14. de Hydrope, obs. 3.*—An Ascites after vomiting eighteen Pounds of Blood. *River. Obs. Commun. 15. p. 556.*—The same from a spitting of Blood. *Lister, Exercit. Med. de Hydrope, ægrot. 2.*

(*i*) People in *Holland*, and other fenny Countries, are more subject to Dropsies than those who live in a more pure dry Air.

Life

Life (*k*); by too thin watery Diet (*l*); by Diseases that cause a Diminution of the Strength, either

(*k*) A Hydrops Pectoris from a sedentary studious Life. *Bonnet. Sepulch. Anat. lib. ii. sect. 1. obs. 76.*—*Ramazzini de Morb. Artific.* shews, by a Variety of Examples, how frequent Dropsies are among those People whose Employment requires a sedentary Life, and exposes them to Moisture.

(*l*) A young Woman, a Nurse, having, in order to increase her Milk, drunk immoderately, Night and Day, of Beer, sometimes by itself, sometimes mixed with Milk, contracted a monstrous Ascites. *Willis, Pharm. Ration. part 2. cap. 3. sect. 2.*—See such another Case in *Miscel. Curios. a. n. c. dec. 2. ann. 9. obs. 133*—An Ascites from frequent Hæmorrhages, and the too liberal Use of small Liquors. *Philos. Transf. No. 471. sect. 15.*—The following Case I had from Dr. *Fothergill*: A Person who had been ordered to drink Barley-Water plentifully, to remove a Fever, drank about six Quarts of this Liquor daily, during a Month, and acquired an obstinate and almost incurable Anasarca.—*Schulzius* tells us a very pretty Experiment relating to this Subject: he bled a very strong Dog till he almost fainted, and then forcing him to swallow a large Quantity of Water, he soon became Hydropic. *De Elastic. Effect. in Haller. Disput. Anat. vol. iii. p. 670.* Dr. *Hales* opened the jugular Vein of a living Dog, and fixed in it the one End of a long Tube directed towards the Heart; and then poured into a Funnel, fixed at the other End of

the

either of the whole Body (*m*), or of some particular Part (*n*).

Whatever

the Tube, blood warm Water, which entered the Vein with a Force equal to that of the Heart, by the Tube's being raised to a proper Height; and very soon after he observed that as the Water was poured into the Tube, the Blood which run out of the cut Vein, above where the Pipe was fixed, became gradually more and more diluted; and that in half an Hour the Creature was quite dropfical, having both the Cellular Membranes and Cavity of the Abdomen filled with a watery Liquor. See *Hæmaſtat. Exp.* 14.

(*m*) We had a great many Cafes in the Military Hospitals in *Germany*, during the late War, of Dysenteries, Fevers, and Agues, which were ſucceeded with dropfical Swellings either of the lower Extremities or of the whole Body.—Such daily occur at *St. George's* and the other Hospitals about *London*—and numerous Examples of this Kind are related by *Hoffman*, *Forreſtus*, and other practical Authors.

(*n*) A Hydrocele from a Bruife on the Saddle. *Turner's Surgery*, vol. i. p. 229.—A Dropſy of the Belly from a Blow on the Right Side. *Mead. Mon. Med. cap.* 8.—Of the Foot from a Luxation of the Ankle. *River. Cent.* 3. obſ. 75.—We had in the Year 1755, in *St. George's* Hoſpital, a Patient, *Robert Damyerin*, who was received into the Houſe for an Anaſarca, which he attributed to a Sprain of his

Whatever is the original Cause of a Dropsy, it may be concluded, from Sec. 9 and 10, that more or less of the Patient's Body will be weakened by such a Collection of extravasated Fluids, and that in Proportion to the Extent, Continuance, and Effects of the Disease; and therefore the Dropsy itself is necessary to the Increase, or even to the bringing on of this Cause which we have been now considering.

13. When the proper Organs for the Excretion of watery Liquors do not allow them to pass off, the superfluous watery Serum that remains in the Body is often thrown into some of the Cavities, and occasions dropfical Swellings in those Parts (o): And the Retention of those

his Wrist in lifting a Burthen; immediately he said his Wrist began to swell, and the Swelling spread from thence all over his Body.

(o) A subcutaneous Dropsy from a Suppression of the Menfes. *Forest. lib. 19. obs. 34.*—Ascites from a Stoppage of the Hæmorrhoids. *Ibid. obs. 39.*—From an habitual plentiful Sweating in the Hams ceasing. *Act. Physic. Med. a. n. c. vol. v. obs. 2.*—From both Kidneys being stuffed

those Liquors in the Blood longer than the ordinary Time, increafing too much their Tendency to the putrefcent, contributes, as well as the Abforption of the effufed Liquors, to the Thirft which many hydropic People complain of.

Women being more fubject to a Stoppage of the natural Excretions, and of a weaker Frame, are alledged to be more frequently attacked by Dropsies, than Men.

14. Whatever obftructs the Circulation of the Blood in the larger Veffels, may produce a Dropsy : For if the Blood be ftopped in the large Veffels, the fmaller ones are over-filled, and the thin or watery Part of the Blood is forced off into Cavities through the lateral arte-

ftuffed with Mucus. *Bonet. Sepulch. Anat. lib 3. feét 21. obf. 8.*—From the Left Kidney confumed by an Ulcer, and the Right one totally obftructed by a Stone. *Bartholin. Epift. Cent. 4. epift. 17.*—From a Dyfuria. *Lifter. Exercit. Med. de Hydrope, Ægrot. 15.*—From a fudden Stoppage of Urine. *Mifcel. Curiof. a. n. c. dec. 3. ann. 5. & 6. obf. 185.*

rious

rious Branches ; while the absorbent Veins being also full, and gorged with Liquors, the bibulous Mouths of their Capillaries take up little or nothing. It is in this Way that the Legs of People in the Ascites, and of Women with Child, become œdematous ; and that numerous Dropsies are produced by Polypi (*p*) in the Heart or large Vessels, by Schirri (*q*), Impost-humes

(*p*) A Dropsy of the Breast and Abdomen, from a Polypus in each Ventricle of the Heart. *Ephem. German. dec. 2. ann. 6. obs. 232.*—See many Histories of Ascites from the same Cause. *Bonet. Sepulch. lib. 3. sec. 21. obs. 3.*

(*q*) In *Bonetus's Sepulch. Anat. lib. 3.* and most other medical Observators, there are numerous Histories of Dropsies from Schirri of the Viscera. I have seen many Examples myself of Dropsies from a schirrous Stomach, Liver, Spleen, Pancreas, and Ovaria. Two uncommon Cases which I saw in the Year 1752 I shall here relate : One — *Mac Donald*, a Soldier, being seized with a quartan Ague in *Flanders*, after some Time observed a Tumour in his left Side below the Ribs, and soon after all his Belly swelled. He returned to *Scotland*, and was taken into the Infirmary at *Edinburgh*, where he died. His Body being opened, a considerable Quantity of Water was found

humes (*r*), Tumours, and other Causes of Obstruction or Compression (*s*).

13. Such

found in his Belly, and a schirrous Spleen beset with two little Bags, which contained about six or seven Ounces of Water; the whole weighed one hundred and twenty-six Ounces.

The other, a Woman who died of an Ascites, whose Stomach was quite schirrous, being in some Places near an Inch thick: Its Plicæ were all hard, schirrous, very prominent, and seemed convoluted in an extraordinary Manner. The Pancreas too was firm and hard.

Although the many Observations since Dissections of human Bodies have been frequent, shew that the Ancients erred in attributing Dropsies entirely to the Liver, or to it and the Spleen; yet none of the other Bowels so frequently give Rise to, or are so often hurt by this Disease; which every one must be convinced of, who has examined many hydropical Bodies, or who will look into *Bonetus*, *Schenkius*, and the other Collectors of practical Observations. Moreover, the Situation, Texture, and Uses of these Viscera, prove that it must be so. The Liver is so situated, that the Vena Cava must be compressed whenever it swells and becomes hard; and the Blood which passes through it has been deprived of its finer Parts, and in their Stead received Particles from our Food and Drink, which have undergone no Preparation by the Circulation, and therefore Obstructions must frequently happen here.

The

15. Such Causes as contract the small Vessels, or vitiate the Fluids, so as to prevent the
Blood

—The Spleen discharges its Blood into the Liver, and consequently often suffers with it. The Texture of both is so tender, that they are easily hurt by soaking in acrid Water, or by any other external Cause.

(r) A Dropsy of the Breast, from an Imposthume of the Lungs. *Schenk. Obs. lib. 2. de Pect. Hydrope, obs. 6.* I have often found more or less Water in the Thorax of People who died of the Phthisis Pulmonalis.

(s) The Baron *Van Swieten* gives an Account of a Dropsy of the Belly, which was occasioned by the Omentum being distended into a steatomatous Tumour, which weighed thirty-three Pounds. See *Comment. sect. 1239, vol. iv. p. 235.*

An unmarried Woman, after being some time in a bad State of Health, perceived a Swelling in the lower Part of her Belly towards the Right Side. Some time after she became dropfical, and the Disorder increased daily for some Years, till she died. She had taken Variety of Medicines without receiving any Benefit. After her Death the Body was opened, and I was present at the Dissection. The Abdomen was full of Water, and there were two large steatomatous Tumours towards the Right Side, which lay above the Uterus. The one was about the Size of the Head of a new-born Child, and arose from the Fundus
C Uteri

Blood from passing freely from the Arteries into the Veins, may have the same Effects; hence

Uteri by a Root not larger than one's little Finger. The other was at least three Times that Size, and arose by a Root two Inches thick, from the Uterus at the Place where the right fallopian Tube joins it. The Substance of the right Tube was greatly enlarged, and filled with a steatomatous Matter, and was beset with five or six Hydaticides.

. An Officer on Board a Transport Ship received a violent Blow on his Breast, which was at first neglected, there being no Surgeon on Board to bleed him, or give him any proper Directions. When he came to *England*, he had a violent Difficulty of Breathing, attended with hectic Symptoms, for which he consulted a Physician of Eminence in Town, but died soon after. His Body was opened. There was a Pint of extravasated Serum in the Abdomen; four Quarts of a yellowish Serum in the Cavity of the Left Side of the Thorax; and the Lungs of that Side were so compressed as to have the Appearance of a Piece of Flesh, without any Remains of a Vesicular Texture, and were less than the Size of one's Fist.—In the Right Side of the Thorax there were three Pints of the same sort of Serum, and the Lungs greatly contracted.—The Pericardium was thickened on the Left Side, and contained rather more Water than common; and there was a large firm Polypous Concretion in each Ventricle of
the

hence this Disease is frequently occasioned by Food too viscid and tenacious to be rightly concocted

the Heart, with long Appendices to each, which extended themselves into the large Blood Vessels.

In the Year 1750 I dissected the Body of a Man who died of an Universal Dropsy, in the Presence of Dr. *John Rutherford* Professor of Medicine in the University of *Edinburgh*: we could discover no other Cause of the Disease than the Ossification of the *Valvulæ Mitrales* in the Left Ventricle of the Heart, by which the Orifice of that Ventricle was so straitened, that I could scarce force my little Finger into it. The Heart itself was very large. While the Man was alive, all the soft Parts of the Neck were raised by every Systole of the Heart, in such a Manner that the Veins there seemed to have a Pulsation.—An Instance of the same Kind may be seen in *Peyer. Method. Hist. Anat. Med. cap. 6.* quoted by *Kemper de Valvul. Natura in Haller. Disput. Anat. vol. ii. p. 107.*—A Dropsy of the Breast with Asthma, difficult Breathing, fainting Fits, a gradual Failure of the Pulse, and at last a total Cessation of it for a Day or two before Death, from the semilunar Valves of the Heart being ossified, and stopping entirely the Passage of the Blood. *Ruyfch. obs. 69*—In the very large flaccid Heart of one who died of a Dropsy of the Belly, Thorax, and Pericardium, the Valves of the two great Arteries were ossified, and there was a large Polypus in the Left Ventricle of the Heart. *Miscel. Cur. a. n. c. dec. 3. an. 9 & 10. obs. 89.*—An Hydropic Tumour, about
C 2 the

concocted and assimilated to the other Juices (*t*); by cold moist Air (*u*); by violent long-continued Exercise (*w*); by the too liberal Use of spirituous Liquors (*x*), which stimulate and harden

the Size of a Hen's Egg, a little below the Navel, occasioned by three Stones in the Cellular Membrane under the Skin; the largest weighed a Drachm, the second two Scruples, and the least about half a Drachm. *Primit. Physic. Med. Poloniæ, vol. ii. obs. 9.*—Lower tried a very pretty Experiment to ascertain this Cause of the Dropsy: he made a Ligature on the inferior Vena Cava of a Dog, and in a few Hours the Animal expired: a great Quantity of Water was collected in the Belly, as if the Creature had long laboured under an Ascites. He found too, that tying the Jugular Veins made the Head œdematous. *De Corde, cap. 2. p. 128.*

(*t*) A Dropsy of the Breast and Belly, from bad Diet, and a sedentary Life. *Hoffman, tom. 3. de Hydrope, obs. 6.*

(*u*) An anasarcaous Swelling of the Head from Cold. *Binninger, obs. cent. 1. obs. 94.*

(*w*) A Dropsy of the Breast, from too violent Exercise. *Willis Pharm. Ration. p. 2. sect. 1. cap. 13.*

(*x*) A Dropsy of the Breast, from Cold and drinking Spirits. *Hoffman, tom. 3. de Hydrope, obs. 7.*—A Dropsy with two Relapses, from drinking Spirits. *Lister. Exercit.*

harden the Vessels, while they coagulate and render the Liquors too gross ; by old Age, in which the whole Body becomes rigid, the small Vessels contracted, and the Fluids viscid (y) ; and, lastly, by morbid Particles retained in the Blood, causing Obstructions in different Parts of the Body (z).

16. After the Discovery of the Lymphatics, about a Century ago, many Writers on the Dropsy attributed this Disease to the Rupture of these Vessels ; but although it be true, that in Dropsies of the Ovaria, and between the Cellular Membranes and the Peritoneum, and in other

Exercit. Med. de Hydrope, ægrot. 16.—A subcutaneous Dropsy, from the same Cause. *Ibid. ægrot. 1.*—The most judicious *Sydenham*, in his Chapter *de Hydrope*, justly declares Drunkards more subject to the Dropsy than other Men ; “ *Bibacissimos quosque helluones sæpius hoc morbo, quàm cæteros mortales, conflictari.*”

(y) It is a general Remark, that old People are more subject to Dropsies than young.

(z) We daily meet with Dropsies which come after Agues and other Diseases, and Histories of such Cases are to be seen in most modern Writers of Observations.

Parts of the Body we often find Quantities of viscid Liquors, resembling the coagulable Lymph, mixed with the hydropic Waters, which would make us suspect some Lymphatic Vein to have been burst; and that we have Histories of the thoracic Duct's being ruptured and causing a Hydrops Lactea of the Breast (*a*); and of the Abdomen being filled with a milky Liquor, which must have come from burst lacteal Vessels (*b*), which resemble the Lymphatics

(*a*) In the Body of a Man who died after a large Quantity of chylous Liquor had been let out of his Thorax, an Orifice was discovered about the third or fourth Vertebra, from which the chylous Matter flowed as from a Fountain. When the lower Part of the thoracic Duct, where it rises out of the Receptacle of the Chyle, was blowed into, the Air unexpectedly came out at the Orifice above-mentioned. This white Liquor coagulated with Salt of Tartar, but not with Spirit of Vitriol. *Bassii Observ. dec. 2. obs. 7.*

(*b*) A Girl having made too great an Effort to raise a Burthen, became hydropic soon after. Being frequently tapped, there always issued from the Puncture chylous Matter, in Colour, Taste, and Consistence, not unlike Milk with a little Salt in it, which being set on the Fire, rarefied

phatics greatly ; yet we have no Reason, either from Observation or Experiment, to believe that this is such a frequent Cause of Dropsies
as

rarefied like Milk, and rose up in the Vessel. It coagulated with Salt of Tartar, but not with Acids, as in the preceding Instance. *Memoir. de l'Acad. des Sciences, 1700.* See such another Case, *ibid. 1710.*

In Dr. R. Morton's *Phtisiologia* there is an Account of a *Hydrops Ascites Lactea* in a Boy two Years of Age, which, after his Death, was found to have been occasioned by a Number of large indurated Tumours, situated behind the Trachea Arteria, which compressed the thoracic Duct near to the subclavian Vein, as much as if a Ligature had been made upon it ; and had certainly been the Cause of a Rupture of some of the lacteal Veins in the Abdomen. *Lib. i. cap. 10.*

That I might judge whether this hydropic Liquor was Chyle, I made a Ligature on the thoracic Duct of a Dog that had eat heartily an Hour before. The Receptacle of the Chyle became immediately very turgid with this Liquor, which tasted like Whey with some Salt in it, but coagulated as soon as it was exposed to the Air, into a Consistence like Starch as it is prepared for putting on Cloaths, so that we had not time to mix different Liquors with it before it coagulated. To avoid this Inconvenience, we got another Dog, and tied his thoracic Duct in
C 4 the

as is commonly alledged; for none of the Observators mention their having ever seen the Orifice of broken lymphatic Vessels which furnished the hydropic Water; and we are sure Dropsies can be without any Rupture of these Vessels; for *Lower de Corde, cap. 2. p. 129.* tells of his having dissected many Sheep that died of Collections of Water in the Thorax and Abdomen, whose lymphatic Veins were

the same Manner, then separating Part of the Duct from the Vertebrae, put the End of it successively into different Liquors made near as warm as the animal Heat, and into each of these we suffered a small Portion of the Chyle to flow. In Water it coagulated almost as in open Air; in Oil of Tartar it became turbid and slimy; in Spirit of Hartshorn it afforded only a glutinous Cloud; in Spirit of Vitriol, a white but tender Curd; and it coagulated in Alcohol and Oil of Turpentine. These Experiments I repeated several Times, and in doing them, sometime either the Receptacle itself, or some of the larger Lacteals in the Abdomen, burst; and upon examining we found, below the Root of the Mesentery, a great deal of extravasated Chyle, which was firmly coagulated, and when we took it out of the Body, had the Appearance of a Piece of soft Fat, but upon handling much, melted down into a watery Liquor.

so full and turgid, that he could easily trace their Course; which could not have been the Case had any of them been burst.

17. The Orifices or Ducts leading from Cavities that are continually moistened with fine watery Liquors, being obstructed, a Dropsy is produced in the Cavity; hence the Dropsy of the Uterus, &c. But it seems improper to apply the Name of Dropsy to those Disorders which are occasioned by a preternatural Retention of Humours different from an aqueous Serum, such as the Urine (*c*), and Bile (*d*),
in

(*c*) The Belly distended with Urine, from a bursted Bladder. *Plater. Prax. lib. iii. cap. 3.* cited by *Bonet. Sepulch. Anat. lib. iii. sec. 21. obs. 20.*—The Pelvis of the Kidney distended so as to contain 2 lb. of Urine. *Haller. Opuscul. Patholog. obs. 60.*

(*d*) *Petit* gives several Instances where the Gall-Bladder was so much distended with Bile, as to be mistaken for an incysted Dropsy and Abscess of the Belly, and for such was opened, which either destroyed the Patient, or left a fistulous Sore that could not be cured; and he acknowledges, that
he

in their own proper Receptacles, or when they are discharged from them into other Cavities.

18. Hydropical Collections may not only occasion other Dropsies by their Pressure (*e*), in the Manner mentioned in Sec. 14 ; but if a Cyst containing morbid Water happens ei-

he once was in Danger of committing such a Mistake ; for he had cut through the external Teguments, when the Tumour beginning to subside, made him immediately suspect it to be the Gall-Bladder, and to desist from the Operation ; soon after the Patient passed by Stool some Pints of Bile, and was cured. He says that such bilious Tumours may be distinguished by their Situation, and an uneasy painful Tension about the hepatic Region, followed by a Jaundice with all its Symptoms ; without the Pulsation, acute Pain, or Shivering which accompany Suppurations of the Liver. *Memoires de l'Acad. de Chirurgie, vol. i. p. 155.*

(*e*) The Anasarca in the lower Extremities, and Hydrocele in the Scrotum, are often brought on by an Ascites, and disappear whenever the Water of the Belly is drained off. The humoral Asthma and Collections of Water in the Thorax often cause a general subcutaneous Dropsy.

ther

ther to burst (*f*) or be eroded (*g*), it may fill a Cavity where it was not originally collected, and cause a Dropsy there.

PROGNOSIS.

19. The Prognostic to be made in this Disease is taken, as in all other Cases, from the Part it affects, its Cause, Continuance, and Symptoms; together with the Age, Strength, and Constitution of the Patient:

(*f*) A Sac in the Belly bursting by a Fall caused an Ascites. *Æt. Hafniens. vol. v. obs. 12.*—A like Case is related by *De Haen*, in his *Rat. Medendi, part 5, cap. 2 sec. 1.* An Ascites formed by the bursting of an incysted Dropsy of the Abdomen. *Medical Essays, vol. v. art. 64.*—A Hydrops Pectoris caused by the Rupture of a Cyst full of Water there. *Hoffman de Hydrope, obs. 7.*—A scrotal Anasarca from the bursting of the vaginal Coat of the Testicle. *Douglass on the Hydrocele, chap. 1. sect. 7. p. 89.*

(*g*) The watery Matter of a large Sac in the Thorax made its Way by Erosion through the Diaphragm into the Abdomen, where were found about nine Pounds of Liquor; the Sac in the Thorax contained three. *Æt. Medic. Berolin. dec. 1. vol. vi. sec. 8.*

all

all which cannot be particularly treated of at present (*b*).

INDICATIONS OF CURE.

20. From the Account now given of Dropsies, the three following Indications of Cure are plainly pointed out to us.

(*b*) These Circumstances are so numerous, and there is such a Variety of Degrees and of Combinations in each, that it would be intolerably tedious to recount all that might be supposed, even in the particular Species of Dropsies; at the same Time the Labour seems very unnecessary, for surely no one needs to be told, that, *cæteris paribus*, a Dropsy in the Ventricles of the Brain or Pericardium, is more dangerous than an Anasarca in the lower Extremities; that a Polypus in the Heart or Schirrus of the Liver are worse to remove than an humoral Asthma: that a Disease of old standing is worse to cure than a recent one; that a young Person recovers out of several Diseases that would kill an old Man; that a strong Person, who has before enjoyed a good State of Health, has a better Chance for Life than one whose Constitution is wore out by long tedious Diseases or Debaucheries. These, and such like Circumstances, however, are the Particulars on which a Prognosis is to be formed.

I. To

1. To remove the Cause of the Disease.
2. To evacuate the extravasated Water.
3. To prevent a Relapse.

All that relates to the Cure is comprehended in the two first Indications, both of which must be pursued at the same Time : but that the Directions for performing this may be better understood, it is necessary to consider each of them separately.

INDICATION FIRST.

21. The first Indication of Cure leads to the Consideration of the Means proper for removing the different Causes of Dropsies mentioned from Sect. 11 to 18.

22. If the Dropsy derives its Origin from Weakness and Relaxation of the Solids, and too thin watery Fluids, we must endeavour to strengthen the Solids, and to restore the natural Consistence of the Fluids.

23. This

23. This is to be done by,

a. A nourishing easy digested Food, and strict Temperance in respect to Liquids (*i*). “The Food,” says *Celsus* (*k*), “ought to be
“of a middle Consistence, but rather of the
“dry Kind. No more Drink ought to be
“given than is absolutely necessary for the

(*i*) A Woman of thirty Years of Age was cured of an Anasarca by abstaining almost entirely from Drink for a Year: And a Countryman, a Neighbour of her's, was cured in the same Manner, in four Months. *River. Obs. Commun. a Jacoz. obs. 21.*—There are other such Cases in *Schenk. obs. lib. iii. obs. 3.*—*Miscellan. a. n. c. cent. 6. obs. 33.*—*Act. Phys. Med. a. n. c. vol. i. obs. 33.*—See two Instances of People cured of the Ascites by the same Means in *Mead. Monit. Med. cap. 8.*—And one in *Panarol. Roman. Pentecost. 4. obs. 33.*—Mrs. *Wilkinson*, after having been tapped for an Ascites, was cured by a rigorous Abstinence from Liquids, taking no Medicines but *Lower's* bitter Infusion, and sometimes a Spoonful or two of a cordial Julep. *Dr. Banyer in Philos. Transf. No. 471. sec. 15.*

(*k*) “Cibus esse debet ex media quidem materia, sed
“tamen generis durioris. Potio non ultra danda quam ut
“vitam sustineat, optimaque est quæ urinam movet.”
Celsus, lib. iii. cap. 21.

“ Support

“ Support of Life, and that is best which promotes Urine.” Bread well leavened, toasted, or seasoned with Aromatics, Eggs, the firmer Kinds of Flesh, should make the principal Part of it; for Drink, the Patient ought to use good old Wine, or Beer in which Bitters have been infused.

β. Friction and Exercise.

Rubbing the Skin with a Flesh-Brush or coarse Cloth, not only takes away the viscid Matter that obstructs the Ends of the cutaneous Vessels, but drives forward the Liquors in those Vessels, and thereby increases the Perspiration, and at the same time promotes the Circulation through the whole Body (1).

Travelling

(1) Friction with Oil was formerly a common Remedy, but had been laid aside till the late Dr. *Oliver* of *Bath* tried it with some Patients, in the Years 1752, 3, & 4; and the Doctor has assured me, that he has seen three Persons, who were judged to have laboured under a true Ascites, cured by anointing the whole Abdomen with Olive Oil,
Morning

Travelling in a Coach, or on Horseback, walking, running, and all such Exercises, increase the Motion of the Blood, shake the pendulous Bowels, promote Digestion and the different Secretions, and are found by Experience to be powerful Strengtheners (*m*). Some Caution

Morning and Evening, for three Weeks or a Month, as the Patient's Case required; they began to make Water plentifully on the third and fourth Day, and continued to do so till the Abdomen was quite emptied. One of them had had several Pints of Water taken from her by tapping, but filled again before the Use of the Uction.—See in *Forestus* an Account of a Woman being cured of an Ascites by rubbing her Belly with the Oleum Ranarum, *lib. xix. schol. ad obs. 35.*—Though I have seen severals who received great Relief from rubbing the Abdomen strongly with Oil Morning and Evening, yet I have never hitherto seen a confirmed Dropsy cured by this Method; however other Practitioners have told me, that they have known Cures made by such Frictions.

(*m*) A Dropsy of the Belly, cured by hard Labour, without any Medicines. *Marcell. Donat. Hist. Mirab. lib. i. cap. 21.* quoted by *Schenkius, lib. iii. Obs. de Hydrope Insperat. Event. Liberat.*—*John Blanch*, a Merchant at *Paris*, having made a Journey to *England* in Winter, felt the dropfical

tion however is to be observed in their Use; for if they are more violent than the Strength of the Patient allows, they weaken the whole Frame: When they fatigue the Body, and depress the Spirits, they are injurious.

γ. Gentle Compression. For Pressure supports and sustains the weak relaxed Vessels, prevents the Distraction of the Fibres, and sometimes is of great Service in the Cure of a Dropsy (n).

δ. Medicines which stimulate the sensible Organs, and increase the Action of the Vessels, whether their Action depends on, 1. Their

dropscal Swelling of his Belly subside in a wonderful Manner, the Disease vanished, nor did he ever suffer a Relapse. *Holler, lib. i. de Morb. Intern. Schol. Ad. cap. 39. p. 279.*

(n) A Dropsy of the Head cured by Bandage alone. *River. Obs. Commun. a Formio, obs. 6.*—*Fabritius ab Aquapendente* says, he has cured subcutaneous Dropsies of the Head, by applying Sponges wet with Lime-Water, and above that a tight Bandage. *Operat. Chirurg. de Hydrocephal. p. 179.*

D

subtil

subtil acrid Oil, of which Kind are the warmer Spices, as Pepper, Ginger, Nutmeg, Winter's Bark, the common aromatic Plants and Seeds, Mint, Lavender, Hyssop, the Seeds of Anise, Carway, Coriander, and the like.—
 2. Or their pungent, bitter, and astringent Quality, such are Flowers of Camomile, the Tops of the lesser Centaury, of Wormwood, of Carduus, the Cortex, Gentian.—3. Or the strong smelling Gums and Rosins, Asafoetida, Benzoin, Myrrh.—4. Or sharp Salts, whether the volatile ones of Hartshorn, of Sal Ammoniac (*o*); or the fixed Alcalies, Salt of Wormwood, of Broom, of Tartar.—5. Or a Mixture of acrid Salt and Oil, as in Mustard Seed, the Leaves of Cresses or Scurvy-Grass, the Roots of Pellitory, of Horse-Radish, of Onions, of Garlick, and in the other vegetable Substances commonly called *alcalescent*.

(*o*) *Blancard* relates the History of a Baron's Daughter who was cured of an *Ascites* by the volatile Salts and the Cortex *Sambuci*. *Prax. Med. par. iii. cap. 22.*

All

All these Things, administered in proper Doses, and in a proper Manner, restore and increase the oscillatory Power of the Fibres (*p*).

ε. Iron

(*p*) A Woman, thirty Years of Age, labouring under a subcutaneous Dropsy as well as an Ascites, was restored to Health by the Use of an Infusion of Tops of Wormwood and Juniper-Berries, which increased the Quantity of her Urine. *Heister in Haller. Disput. Anat. vol. vi. p. 713.*—Two hydropic People cured by the Juice of Wormwood. *Miscel. Curios. a. n. c. dec. 1. ann. 3. obs. 322.*—A Leucophlegmatia after Abortion, cured by the Use of bitter Stomachics, and a few Doses of Purgatives. *Hoffman, vol. iii. cap. 14. de Hydrope, obs. 3.*—A Soldier was cured by a Decoction of Tansey. *Miscel. Curios. dec. 2. ann. 2. obs. 112.*—In July 1743, Mr. *Pinkstan*, Surgeon, in *St. Alban's-street*, was called to a Gentleman of seventy-two Years of Age, who had formerly been Captain of a Man of War, and had lived freely in the former Part of his Life. In December 1742, he was seized with an universal Anasarca, which continued increasing till the Time Mr. *Pinkstan* was called in, when he found him swelled to a monstrous Size. He scarified immediately one of his Legs, and ordered him to take a Purgative next Morning. A good deal of Water was discharged by the Puncture; but next Day the Leg was much inflamed round the Wound, which was soon relieved by warm Fomentations and Dressings of Linimentum Arcæi and Oil of Turpentine. The Physic
D 2
purged

5. Iron and its Preparations are mild Astringents, stimulate gently the Fibres of living Animals

purged him four Times ; after which he was ordered to take the following Draught twice a-Day: *R. Aq. cinam. simp. fescunc. oxymel. scillit. drachm. i. ss. spirit. lavendul. com. drach. i. sal. tartar. drach. i. ss. syrup e cort. aurant. drach. 2. m.* which made him pass great Quantities of Water by Urine, and carried off all his Swellings in ten or twelve Days ; and the Cure was completed by some strengthening Bitters. His common Drink was Rhenish Wine and Spaw Water. He continued well for two Years, and was then taken ill of an Ascites, of which he died.—See in *Mead's Mon. Med. cap. viii.* the good Effects of the Lixivium of Tartar and Opium, in curing a Patient with whom other Remedies had failed.—Several cured by Garlic. *Forest. lib. xix. obs. 27.*—In Summer 1760, a young Man, an Out-Patient at *St. George's Hospital*, who was ill of an universal Anasarca, after taking Variety of Medicines which I had prescribed for him, *Purges, Squills, lixivial Salts, Antimonials, &c.* without receiving Benefit, told me that a Friend had advised him to drink an Infusion of the Pellitory by the Wall (*H. Parietariæ*). I desired him by all means to try it, and as he was costive, to take occasionally a Dose of Jalap and Nitre. After drinking this Infusion for some Days, he began to make Water freely ; and when he came to the Hospital the Week following, his Swellings were sensibly decreased. By continuing

Animals (*q*), and are generally allowed to be powerful Corroborants, and serviceable in the Dropsy.

§. Medicines endowed with a strong astringent Virtue only, such as Alum, Oak, and Pomegranate Bark, increase, it is true, the Firmness and Rigidity of the Fibres, even of

nuing this Course for three Weeks longer, his dropfical Complaints were all removed, and the Cure was completed by his taking for a Week or ten Days an Infusion of the Bark, and other Bitters, to restore his Strength.—The Particulars of this Case I had taken Notes of, but they were lost while I was abroad with the Army.

Mr. Gataker, *Surgeon-Extraordinary to his Majesty*, told me that he had known a Person who was very ill of the Dropsy cured by the following Medicine, which proved strongly diuretic: Take of *Dwarf Elder, Asparagus Roots, Parsley Roots, Horse-Radish* thin sliced, *Pellitory of the Wall*, of each one Handful. Put them in a Pan, pour boiling Water on them; let them stand for some Time, and strain off the Liquor through a Cloth. Drink a Wine Pint every Morning; fast an Hour.

(*q*) For Experiments in proof of these Qualities of Iron, see Dr. *Wright's Dissertat. de Ferro. sect. iii. § 2, 3, 4.*

dead Animals, and may be of Service in subcutaneous Dropsies, externally applied; but when given internally, they do not seem to enter far enough into the smaller Series of Vessels, or to produce such good Effects in dropfical Cases as the gentle Astringents, formerly mentioned (d).

„ The cold Bath, so serviceable in many other Diseases proceeding from Laxity of the Fibres, is very often prejudicial to dropfical Patients. Wherever the Fibres and small Vessels are already so much relaxed, that the Plunge into cold Water does not prove a sufficient Stimulus to increase their Action, and to promote the Circulation and Heat of the Blood, the cold Bath does Hurt; for in such Cases the cold Water externally applied helps to chill and cool the Blood, and to render the Circulation more languid, instead of making it brisker to increase the Absorption and Excretion of watery Fluids; and what Water is taken up by the absorbent Veins serves to increase the
dropfical

dropfical Swellings. *Celfus* (*r*) therefore juſtly obſerves, “ that Bathing, and all Moisture, is “ hurtful.”

24. If a Dropsy proceeds from the Blood's not being ſufficiently freed from its ſuperfluous watery Parts by the uſual excretory Organs, thoſe Paſſages muſt be opened. But of this hereafter, when we come to treat of the ſecond Indication, and to deſcribe the different Methods by which this is to be done. At preſent it will be ſufficient to mention one neceſſary Caution, namely, that if the Obſtruction is ſudden, and the Patient ſtrong and plethoric, Bleeding muſt not be omitted; for daily Experience teaches us, that, in this Manner alone, Veſſels obſtructed by Fulneſs, or by too great a Contractility of their Sides, can be ſafely, ſpeedily, and agreeably freed from theſe Diſorders.

(*r*) “ Balneum atque humor omnis alienus eſt. *Celfus*, *lib. iii. cap. 21.*—Balneum rarum res amat. *Ibid.*

25. The Impediments to the free Course of the Blood in the large Vessels by Tumours, Strictures, or other Causes mentioned in Sect. 14, are to be removed by the Medicines appropriated to the Cure of each, or sometimes by surgical Operations. But in most of these Cases very little Assistance can be had from Medicine; for what Remedy are we acquainted with that can remove Schirri, Steatoms, Imposthumes, Polypi, or such other obstinate and dangerous Obstructions, when seated in any of the three large Cavities of the Head, Thorax, and Abdomen? Relief in Dropsies depending on such Causes, can only be given by discovering and curing the original Disease; the Method of doing which must be learned from the Rules peculiar to the Cure of each of those Disorders; to treat of which would lead us too far from the present Subject, each Disease requiring a separate Treatment.

26. A faulty State of the Fluids in Dropsies, mentioned Sect. 15, is to be corrected by different Means.

α. Where

a. Where the Blood is thick and fizy, and its Momentum too great in the Vessels, which is often the Case with young People, the cooling antiphlogistic Method must be pursued, and the Patient must be blooded, although the Symptoms of the Dropsy manifestly appear. Nature has frequently directed it (s); one of the oldest and best Observers of her Operations prescribes it (t); and daily Experience confirms its Use (v).

(s) A very strong Man, about the Age of thirty, was seized with an Anasarca, his optic Nerves were obstructed, and he gradually became blind; but having discharged from the Nose about four Pounds of Blood, he was soon restored to Health in every Respect but that of his Blindness, from which he was never totally free. *G. Fab. Hildan. Obs. cent. 1. obs. 50.*—A Man who laboured under a Dropsy and Fever, was much relieved by an Hæmorrhage from the Nose, that happened twice or thrice every Day for the Space of three Weeks; the Swelling began to decrease, and the Distemper was totally dispelled by the Use of Diaphoretics and Diuretics. *Miscel. Curios. dec. 2. ann. 3. obs. 170.*

(t) *Hippocrates* is certainly right when he orders a Vein to be opened in dropical Cases, where there is a Difficulty of Breathing, the Patient in the Vigour of Life, and it is
the

β. Too thin watery Blood is to be restored to its natural healthy State by—a dry easy digested

the Spring Season. See his Book *De Viſtu acutorum*, ſect. 62.

(v) I have frequently ordered Bleeding under ſuch Circumſtances, but never found any bad Effects from that Practice, but, on the contrary, have ſeen the Patients conſiderably relieved thereby; and in recent anafarcous Caſes, where the Lungs are much affected, attended with Fever, often nothing will give Relief till the Lancet is uſed. The two following Caſes are of Uſe; the one to ſhew the good Effects of Bleeding, the other the fatal Conſequences of omitting it under ſuch Circumſtances.

On the 20th of December 1758, Mary Wood, a Girl fourteen Years of Age, was admitted into St. George's Hoſpital for an univerſal Anafarca, attended with a Difficulty of Breathing, a ſmall quick Pulse, a Paucity of Urine, and which was high-coloured, and depoſited a Brick-duſt like Sediment. Her Diſorder had begun four Weeks before, from catching Cold. She was at firſt ordered a Squill Draught Morning and Evening, and a Scruple of Jalap with ten Grains of Nitre to be taken twice a-Week—On the 23d her Skin was dry, ſhe complained of being reſtleſs at Nights, and was ordered to take fixty of the anodyne antimonial Drops every Night at Bed-Time.—On the 25th the Difficulty of Breathing had increaſed, and I ordered

gested nourishing Food ; and Drink which gives a proper Stimulus to the Fibres, and is found by Experience to promote the Perspiration and Urine, of which kind is Rhenish or
other

ordered her to lose six Ounces of Blood, and to continue her former Course.—Next Day her Breathing was easier, and the Blood which was taken away appeared very fizy.—From this Time her Medicines began to have a good Effect. The Squill Draughts now relieved her Breathing, and promoted the Discharge by Urine; the antimonial Drops brought out a breathing Sweat at Nights, and her Physic operated freely with an evident Decrease of the Swellings. On the 5th of January she was threatened with a Relapse, and her Breathing became worse, and the Swellings began to increase; but these Symptoms were relieved by a second Bleeding, and the Application of a Blister to the Back.—On the 9th of *February* she was threatened with a second Relapse, which, however, was prevented by the Loss of five Ounces of Blood; after this she grew better daily, and by the 25th the Swelling and Difficulty of Breathing were entirely gone, and she complained of nothing but an Inflation of her Stomach, which seemed to depend on Weakness, and was got the better of by a Dose or two of Rhubarb, and the Use of the Gum Pills and Bitters. She was discharged

other Wine, with some of the chalybeate Waters of *Tunbridge*, *Spaw*, or *Pyrmont*—by Friction and Exercise—by the Use of the stimulating Medicines mentioned in Sect. 23, and

charged the Hospital the 21st of *March*, seemingly in good Health.

On the 20th of *December* 1758, the same Day *Mary Wood* was taken into the House, *John Atwood*, a Lad of sixteen Years of Age, was admitted as a Patient for similar Complaints. He had an universal *Anasarca*, a Difficulty of Breathing, a small but quick Pulse, and made but very little Water, and that of a high Colour; which Complaint, he said, had come about four Weeks before, by sitting up three Nights successively with a Companion who was sick. I at first ordered him the same Medicines as *Mary Wood*, and on the 25th was intending to have had him bled as well as her; but from the Prejudice there is against Bleeding in dropical Cases, I thought it was better to delay it, till I saw what Effects it should have with the Girl. I returned next Day to the Hospital to see these two Patients; but the Boy was dead. His Body was opened; his Lungs were inflamed, as were most of his Intestines, though he had never complained of any acute Pain in these Parts.

Hoffman de Hydrope, obs. 9. tells a very pretty Case of an hydropic Patient, whose Disease he thought depended
on

and of such other Remedies as quicken the Circulation, promote the animal Process, and at the same Time increase the different watery Excretions.

γ. A too putrescent dissolved State of the Blood, such as is sometimes observed in Dropsies after malignant Fevers, and in scorbutic Habits, is to be corrected by the Bark and other Antiseptics, joined to the Use of Diuretics, Diaphoretics, and the occasional Use of Purgatives.

27. In every faulty State of the Fluids, if the Perspiration or the Secretion by Urine, or any of the other natural Secretions or Excretions be obstructed, we ought to endeavour by proper Means to restore these Evacuations.

on an Infarction of the pulmonary Vessels, and who was cured principally by repeated blood-lettings.—*Sponius* affirms, that a Man in a Dropsy, which had increased rather than diminished by the Use of Hydragogues and Diuretics, was cured by twenty Bleedings. *Aphorism. Nov. sect. 5. § 87.*

28. When

28. When the Cause of the Dropsy is a Contraction of the Vessels from Rigidity, the Cure is extremely difficult; for those Things which relax the Vessels, increase the Disease. Such Patients, however, are not entirely to be given up as incurable, since it is better to try a doubtful Remedy than none.

a. Let the Diet be mild, soft, and relaxing, though not too watery : this may be composed of well-baked Bread, Broths, and Jellies, and the boiled Flesh of young Animals, Eggs, and such like.

b. If soft mild Oils applied and rubbed upon the Skin penetrate to the interior Parts, as is commonly believed, they will be of great Service in softening the Fibres (*u*).

c Warm

(*u*) In six ascitical Patients, who had their Bellies rubbed Morning and Evening with Olive Oil, for a Fortnight or three Weeks together, the Skin of the Abdomen was relaxed ; after the two or three first Frictions the Patients

c Warm Water and its Steams are excellent Remedies against Rigidity ; but in the Case we are now treating of, their Assistance must be very cautiously used, lest they increase the aqueous Collection, by supplying the Blood with too much Water. The Waters, however, which are plentifully impregnated with penetrating and dissolving mineral Particles of Salt, Sulphur, or Iron, such as Sea-Water, the Mineral Waters of *Aix-la-Chapelle*, *Bath*, *Spaw*, *Tunbridge*, &c. may be made use of (w).

d. A

tients found themselves easier, and thought they made Water more freely ; but these Effects soon ceased, and they found no more Relief from this Remedy. Two of the Cases I saw, the others I was told by Gentlemen who attended the Patients.

(w) “ But others, and not without Reason, approve
 “ of the Vapour of Sea-Water in order to provoke sweat-
 “ ing. A Bathing-Tub (say they) must be filled with
 “ boiling Sea-Water, into which a square Machine, secured
 “ with leathern Straps, containing the Patient, must be
 “ immersed ; but it must be secured in such a Manner by
 “ the

d. A Discharge of the dropfical Water must be promoted, by Urine, Sweat, and Stool; not indeed by swallowing Quantities of watery Liquors, or Medicines that are very acrid or stimulating; for the first would increase the Dropsy, the others augment the Rigidity; but by those Medicines of the different Kinds that are mild, but not too watery.

“ the Leather, that no Water can enter, and the Sweat-
 “ ing will be excited by the Exhalation of the hot Fluid.
 “ But the Water must be kept hot by the frequent Immer-
 “ sion of red-hot Bars of Iron.” *Cœl. Aurelian. de Morb. chron. lib. iii. cap. 8.*—The Countess of Keglewich having a Dropsy in the Womb, was freed from it after bathing eight Days in the warm Baths of *Newhaus* in *Styria*, having voided a great Quantity of Water and Wind. *Miscel. Curios. a. n. c. dec. 3. ann. 5 & 6. obs. 162.*—A Taylor labouring under a Dropsy of the Belly, having gone into the Baths at *Wissbad*, and drank a great Quantity of these Waters, perceived the Swelling begin to subside while he remained in the Bath. When he came out of it, he was weak and faint, but being refreshed by Cordials and Food, he recovered every Day after. *Ibid. dec. 1. ann. 2. obs. 218.*—See the Cases of six Patients cured by drinking of Bath Waters, and bathing in them. *Pierce’s Bath Memoirs, part 2. chap. 4.*

29. If any Receptacle or Vessel, which naturally receives or transmits a watery Liquor, is opened, and furnishes the Matter of a Dropsy, I scarce know what Assistance Art can give, unless there is such Access to the Opening, that Digestives, Escharotics, Styptics, or Ligatures, may be applied, or a proper Pressure can be kept on the Part by Means of Compresses and Bandages.

30. When a natural Outlet from a Cavity is shut up, it ought to be opened by Methods adapted to remove the obstructing Cause. Coagulated or thickened Liquors are to be dissolved; too rigid contracted Canals are to be relaxed; united Sides of Passages are to be separated; and so forth. The Methods of executing which varying according to Circumstances, cannot be considered till the particular Cases are described.

31. A Dropsy produced by the Pressure of a preceding hydropical Collection
E can

can only be cured after removing the original Disease.

32. If the Water of an hydropic Cyst has made its Way into another Cavity, it must be treated as directed in Sect. 29. or as shall be mentioned afterwards when we consider incysted Dropsies.

INDICATION SECOND.

33. To answer the second Indication, the Waters are to be discharged out of the hydropic Cavities, either by natural or artificial Openings.

34. The natural Openings for hydropic Water, are only (a few Cases excepted) the Extremities of the absorbing Veins, whose Power therefore must be so much increased, that they may absorb more Liquors than the Arteries pour out.

35. The Absorption is increased by every Thing which restores the Strength and Energy of
of

of the Solids, of which some Account has already been given.

36. However it is necessary to observe, 1. That this Absorption can scarce ever take Effect when the Cavities are much distended by the inclosed Water. Either the Sides of these Cavities must be relaxed, or some of the Water must be let out, before the absorbent Veins can act. 2. That the nearer the Medicines designed to promote Absorption are applied to the Parts affected, their Effect is greater and more certain.

37. If the superfluous hydropic Water is absorbed and mixed with the Blood, it ought to be expelled from the Body as soon as possible, lest it be again extravasated and thrown into some of the Cavities. For this Purpose the serous and aqueous Excretions are to be increased.

38. These Excretions are made from the Stomach, Intestines, urinary Passages, the Skin, or salivary Organs.

39. Most of the Medicines which promote these Excretions exert a considerable Stimulus in their Operation, whereby they also strongly promote the Absorption of extravasated Fluids from the Cavities containing them ; but as the lax unfeeling Fibres of hydropic People are not easily roused into Action, they require a stronger Dose than is necessary in many other Diseases.

40. Emetics increase the Oscillation of the Solids, as well as the Motion of the Fluids contained in them. By which Means, and the forcible Compression of the Bowels one against another, the Excretion of watery and slimy Liquors from the Mouth, Throat, and Stomach, are augmented. The more violent Emetics commonly used, are the Vinum Antimoniale, Turbeth Mineral, Emetic Tartar ; the milder Ipecacoana, Squills ; and the gentlest are, white Vitriol, bitter Infusions, and such like (x).

Some

(x) In the *Observations and Inquiries* published by a Society of Physicians at London, vol. ii. art. 24. we have an Account

Some Caution however is necessary in administering Emetics, especially to Patients who are

Account of the Case of a Gentleman 46 Years of Age, who had been thrice tapped for an Ascites, and was likewise swelled all over. The third Day after the last Tapping, he was attacked with a violent Vomiting, which continued for upwards of forty-eight Hours. At first he threw up a large Quantity of dirty Water, mixed with a viscid Phlegm, but next Day what he vomited was extremely offensive, and seemed loaded with Excrement. The third Day he had an Infusion of Senna with Cream of Tartar and fifteen Grains of the *Pilulæ Mathæi*, which procured him Relief, and made him Sleep some Hours. After he awaked, he had no more Vomiting, the Physic soon began to operate, and gave him several watery Stools. From the Beginning of the Vomiting the Swelling of his Legs began to subside, and by the Time it was over, no Degree of Swelling remained. The Quantity of Water he vomited up, exclusive of what he drank, was not less than fifty odd Pints. After this Accident, by great Care, an uninterrupted Use of corroborating Medicines, nourishing Diet, daily Exercise, the Flesh Brush, and Bathing in Sea-Water, the Gentleman recovered his Health, lived fifteen Months free from dropfical Complaints, and at last died of another Distemper.

Dr. D. R—s, formerly Physician to *St. George's Hospital*, after having been long in a bad State of Health, be-

are subject to Hæmorrhages, seeing the Effort of vomiting may, by augmenting the Velocity of

came dropfical, for which he was tapped. After some time the Water collected again in his Belly, and he was thinking of having it let out a second Time, when he was seized with a violent Vomiting, and brought up several Pints of a dark-coloured Liquor, which he said tasted like a Decoction of rotten Straw, and was exactly fimilar in Appearance to what had been drawn off before by Tapping. After the Vomiting he had a Number of loose Stools, and discharged several Pints of the same Sort of Liquor he had vomited up. In a few Hours he found almost all his Swellings gone; and by taking a few Doses of gentle purgative Medicines, his dropfical Complaints were entirely removed, and he lived three or four Years afterwards.

A young Man labouring under a Dropsy of the Belly spontaneously vomited up a great Quantity of Water at two different Times, and was cured without taking any Medicines. *Marcel. Donat. Mirab. Hist. lib. iv. cap. 21.*—A Nun after being tapped several Times for a Dropsy, was cured by the Use of Vomits, all other Medicines having proved ineffectual. *Du Verney. Memoir. de l'Acad. des Sciences, 1703.*—In the Year 1752, a Man in the Hospital at *Edinburgh* was cured by Dr. *Rutherford* of a Dropsy, which proceeded from an asthmatic Complaint, by the Use of frequent Vomits and a few Purgatives.—A dropfical Patient went
out

of the Blood, open the Vessels again.—To such likewise as are threatened with Lethargy or Apoplexy, lest the Matter obstructed in the Vessels be thereby impacted into small capillary Arteries, where the Force of the Circulation, and the Power of Medicines, have little Effect either to resolve or drive it forward into the Veins: and for the same Reason they are dangerous to People under a Dyspnea from thick viscid Matter obstructing the Lungs (y).

Eme-

out some Miles to Sea in a Boat, which made him sick and vomit, by which Means and strong Exercise he was cured. *Forest. schol. ad obs. 32. lib. xix.*

(y) The good, but dangerous, Effects of Vomits in Asthmas from thick viscid Phlegm, I have known twice experienced in the same Lady. The first Vomit she took was in the Paroxysm, which, after violent straining almost to Suffocation, produced its Effect. The Fit went off, and did not return for some Months. After its Return she frequently entreated, but was not permitted, to try the same Expedient, till some Years after, when the Fit was extremely obstinate, and would give Way to no other Remedy, her Physician was obliged to consent. She accord-

Emetics given in so small Doses as not to provoke vomiting, and frequently repeated, often cause a plentiful Discharge of watery Liquor by Stool, Urine, or Sweating.

41. Purgatives generally quicken the Pulse before they operate ; they increase the Secretion of thin Liquors into the Intestines, and discharge their Contents ; while at the same time, by dissolving the Crasis of the Blood, they render the whole Mass more watery, and weaken the Patient.—The strong Cathartics, such as Elaterium, Gamboge, Scammony, Jalap, the Juice of the common Flower de Luce or Iris, and such like, are called Hydriagogues, from their causing a great Discharge

ingly took the Vomit ; the same Scene, but with infinitely more Violence, was acted over again. Her Face turned black, all her Veins seemed ready to burst, her Pulse and Breath were gone, when fortunately changing her Posture, in order to be blooded, the Vomit operated, and, as before, carried off the Fit : but so great was the Danger, that the Gentleman who attended her determined never to try this Remedy again with her.

of

of watery Liquors.—Other Purgatives, such as Senna, Rhubarb, Syrup of Buckthorn, &c. are milder and weaker ;—and there is a third kind, commonly called Eccoprotics, that are very mild ; of this Sort are Cryſtals of Tartar, Prunes, and Tamarinds, which do little more than diſcharge Fæces, and therefore are of little Service to hydropic People.

Among the Cathartics one may reckon Mercury and its Preparations, which of themſelves are purgative, and when joined to other Cathartics, augment their Effects ; ſuch are Quickſilver extinguished in Soap or Honey, Mercurius Dulcis, Calomel (z).

It

(z) In the Beginning of the Year 1750, Dr. *Rutherford* cured a Patient (*A. Bruce*) in the Infirmary at *Edinburgh* of an univerſal Dropsy, by giving him ſtrong hydragogue Purges almoſt every Day for ſome time, and then by the Uſe of ſtrengthening Bitters, Bark and Steel, and proper Exercise, he was reſtored to perfect Health.—A Gentleman was taken ſo ill of an Aſcites, after a Jaundice and vomiting of Blood, that he had Thoughts of being tapped, when Dr. *Liſter* ordered him the following Purgative ; R.
Decoſt.

It ought to be remarked, that, if the hydro-pic Water is not evacuated, nor the Symptoms alleviated by the frequent Use of strong Purgatives, the Mischief must of Course be increased; for “ when the Strength is wasted, violent

Decoct. Epithymi. unc. iv. Syrup. e Spin. Cervin. unc. iii. E-later. gr. v. m. which made him pass by Stool above three Gallons of Water; and by taking two more Doses of this Medicine, at proper Intervals, he got well, and never had a Return. *Lister. Exercit. Med. de Hydrope, ægrot. 4.*—A Peasant being seized with a Dropsy after an Ague, was cured by three Doses of the following hydragogue Purge; *R. Succ. Irid. Nostrat. unc. iii. Mannæ unc. i. ℥s.* which made him evacuate a great Quantity of Water both by Stool and Urine. *River. Obs. cent. 4. obs. 82.*—See other Cases of the Effects of the Iris, in *Misc. Cur. a. n. c. dec. 2. ann. 8. obs. 63.*—*Act. Med. Berol. dec. 1. vol. x. sect. 4.*—*Med. Essays, vol. v. art. 8.*—*Van Swieten* mentions a strong young Man whom he cured of a recent Anasarca and Ascites by two Doses of the following Physic; *R. Pulv. Jalap. scrupulos ij. Turpeth Mineral. grana iv.* See *Comment. in sect. 1247, vol. iv. p. 264.* *Sydenham* cured a Woman of an Ascites by the Use of the Syrup of Buckthorn alone. *De Hydrope.*—It is needless to multiply Examples of Cures made by purgative Medicines; there are few Writers on the Dropsy who do not relate such.

“ Purgings

“Purging is hurtful, since the more Moisture
 “is carried off from the Body, the greater
 “Quantity of it will, in a short Time, be a-
 “gain admitted into the Cavities,” as Dr.
Mead has very justly observed (*a*), and we
 find to be true by daily Experience.

42. If the extravasated Water can be carried
 off by the urinary Passages, the Discharge is
 made with little Loss of Strength ; but it is to
 be regreted that the Operation of the Medi-
 cines intended to promote this Excretion is
 very uncertain ; the Urine of hydropic People
 often continuing to be made in small Quantities,
 and very thick and deep coloured, notwith-
 standing the Use of the most esteemed Diu-
 retics.

a. The Medicines employed to increase the
 Discharge of Urine, are,

(*a*) “Et ubi fractæ vires, nocet vehemens per alvum
 “purgatio ; quo enim plus humoris e corpore ejicitur, eo
 major ipsius copia brevi in cavitates refluit. *Mead. Men.*
Med. cap. 8.

Plentiful

Plentiful Draughts of thin attenuating Liquors; but as they likewise relax the Solids, and increase the Disease by furnishing a Supply of watery Matter, the Use of them in the Dropsy, is for the most Part deservedly forbid; yet sometimes, tho' rarely, they have produced good Effects (*b*).

β. The Acids, such as Juice of Lemons, Tartar, Vinegar, Spirit of Vitriol, and such like Substances, promote the Excretion of Urine, and some of them have been given with Ad-

(*b*) A Monk who had taken various Diuretics for a Dropsy without any Benefit, having drunk a Decoction of Sassafras twice a Day, passed Urine plentifully, and was cured. *Misc. a. n. c.* 1715, cent. 3 & 4. *obs.* 28—A Nun passed Urine plentifully after eating largely of Water Cucumbers, and drinking a great Quantity of Water, which cured her of a Dropsy. *Misc. Cur. a. n. c.* cent. 5 & 6. *obs.* 96.—A Girl, who had the Dropsy to such a violent Degree that she seemed ready to burst, drank great Quantities of thin watery Liquors, contrary to the Advice of those about her, but fortunately a Diarrhœa ensued, which cured her. *Pannarol. Roman. Pentecost.* 2. *obs.* 24.

vantage

vantage in dropfical Cafes (c) ; but as they check the animal Procefs, and diminifh the Heat

(c) The Baron *Van Swieten*, in his *Commentaries*, feft. 1243, quotes a Cafe from *Combalufier*, where Vinegar drank to the Quantity of five or fix Ounces was of Ufe in curing the *Ascites*. See *Combalufier's Pneumato Patholog.* p. 535.

In the fourth Volume of the *Commentaria Academ. Bonon.* p. 260, Dr. *Vincentius Menghini* has a Paper on the Ufe of the Cream of Tartar in the Dropsy. He fays he had the firft Hint of its Ufe in this Diforder from Dr. *Gherlius's Observations*, who mentions his having cured an *Ascites* by giving half an Ounce of Cream of Tartar for feveral Days fucceffively. He then relates fifteen Cafes which were under his own Care, and feverals which were under the Care of others, moft of which were cured by the Ufe of this Medicine, given from two Drachms to an Ounce in the Day, diffolved either in an aperient Decoction or in weak Broth, and its Ufe continued from twenty Days till between two and three Months.—In feveral of thefe Cafes it had no Effect upon the Diforder for the firft thirty or forty Days, though afterwards, by perfevering in its Ufe, it effected a Cure. The common Operation of this Medicine was to give fome loofe Stools, and after taking it for fome Time, it acted as a very powerful Diuretic. During the Ufe of this Medicine, he fays the Patient ought to live on Barley, Spinnage, Endive, or light Broth, and to drink but little, and that to be a fmall Wine.

He

Heat and Momentum of the Blood, they are not in general so proper Diuretics in a Dropsy as those Medicines which have a brisker Stimulus, and both promote this Excretion and increase the Force and Energy of the Vessels. When the Refrigerants are made use of, some stimulating Medicine may be mixed with them occasionally (*d*).

γ. The

He concludes his Paper with the following Observations. 1. That this Medicine proved a strong Diuretic, even in those Cases where it did not make a Cure.—2. That we are not to expect that it will remove every Dropsy which depends on diseased Viscera.—3. That all who were cured by this Medicine were reduced very low, and appeared extremely thin and meagre; but recovered their Flesh and Strength by a proper Diet and Regimen after the Dropsy was gone.—4. That they were all in the Vigour of Life, and the Disease not inveterate, but only of a few Months standing.

I have used the Cream of Tartar in the Manner here recommended, and have found it to be a good Medicine in such Cases; and although it will not answer in every Case, yet it will often produce good Effects. Some of the Cases in which I ordered it are related in the subsequent Part of this Essay.

(*d*) A Man about fifty was suddenly seized with a Dysuria, violent Pain and Vomiting, his Belly swelling to an
immense

γ. The alkaline Salts, both fixed and volatile, increase the watery Secretions; but those of the fixed lixivial Kind have been observed

immense Size: He was blooded, purged, had several Clysters, took Mercurius Dulcis, whilst Cataplasms and other Remedies were applied externally; but all to no Purpose. A Catheter was introduced into his Bladder, but there was no Urine in it. The Man at last seemed a-dying, putrid Ulcers beginning to appear, and a troublesome Hiccough seizing him, when Dr. Lister prescribed the following Medicine: *R. succ. limon. recent. unc. vi. succ. cochlear. hortens. unc. iv. succ. plantag. hepat. singul. unc. ii. syr. violar. unc. ii. m. cap. unc. iv. tertia. q. b.* By the Use of this Medicine he made a great Quantity of Water, was much relieved, and by the Assistance of a few Purgatives recovered. *Lister Exercit. de Hydrope, ægrot. 15.*—A strong young Man became hydropic after a quartan Ague; he had difficult breathing, and made but a small Quantity of Urine with a lateritious Sediment. I ordered him a bitter Infusion, with some Pills of Nitre, Crystals of Tartar, Balsam of Tolu, and Soap; by the Help of these he made Urine plentifully, his hydropic Swellings abated, and by the Use of some strengthening Bitters, and proper Exercise, he recovered his Health.

particularly

particularly to promote the Discharge by Urine (*e*).

∴ And

(*e*) An unmarried Lady, about thirty Years of Age, after taking many Purgative and other Medicines for a Jaundice, Dropsy, and Nephritis, was cured by the lixivial and other Salts, which made her pass an almost incredible Number of Stones. *Misc. Cur. a. n. c. dec. 1. ann. 3. obs. 174.*—The good Effects of these Salts in the Dropsy are also to be seen *ibid. cent. 9 & 10. obs. 55.*—A Woman between forty and fifty Years of Age, never married, a Valetudinarian for twenty Years before, and subject to immoderate Fluxes of the Menses, was affected with an universal Anasarca, for which she took many Medicines of different Kinds without receiving any Benefit. She swelled to a prodigious Size, and seemed almost a-dying when she was advised to take the Broom-Ashes. She began the Use of this Medicine the 8th of *December 1753*, and continued it for some Months. She soon was much relieved, made Water freely, and in considerable Quantity; her Swellings began to decrease, and were all gone by the Month of *May*, when she left off taking her Medicine, and had had no Return of her dropfical Complaints in *May 1756*. She at first took only a Drachm a-Day, divided into three Doses, but gradually increased the Quantity to half an Ounce, and used no other Medicine while she continued this. This Account I had from Mr. *Bayne*, Apothecary in *Cork-street*, who attended the Patient.

Thomas

g. And the neutral Salts prepared by the Mixture of Acids and Alcalies, when pro-

Thomas Blundell, a young Man twenty Years of Age, a Shoemaker by Trade, after working for some Months in a cold Place, lost his Appetite, and, in *November* 1762, observed that his Legs began to swell, and soon after he swelled all over. On the 18th of *May* 1763, he was made an Out-Patient at *St. George's* Hospital. He had then an universal Anasarca, and an evident Fluctuation of Liquors was to be perceived in his Belly. He made but little Water, and that was of a high Colour. His Countenance was livid, like to a Person whose Liver is diseased. He had a constant Thirst, rested badly at Nights, and was inclined to be costive. I ordered him the saline Draughts with five Grains of Rhubarb, three times a-Day; an anodyne Draught, with half a Drachm of the Lixivium of Tartar, every Night at Bed-Time; and a Dose of Jalap and Nitre twice a-Week. From the Time he began this Course of Medicines, he made Water freely, and evacuated large Quantities by Stool the Days he took his Physic, and by the 10th of *July* he was free from all dropical Complaints. Being still weak, he was ordered an Ounce of the Decoction of the Bark, mixed with two Drachms of the Tinctura Aromatica, to be taken Morning and Evening; and a Dose of Tincture of Rhubarb, to be taken once a-Week. On the 27th of *August* he returned Thanks for his Cure, being strong, and seemingly in good Health.

perly managed, often prove powerful Diuretics (*f*).

ε. As

(*f*) A Woman of seventy was cured of a Dropsy by taking a few Drops of rectified Spirit of Salt mixed with Salt of Wormwood, and some of the acrid Diuretics. *Miscel. a. n. c. dec. 2. ann. 7. obs. 57.*—See afterwards the Case of *John Mackan*, who was cured of an Anasarca by the saline Draughts and Purgatives.—In the fifth Volume of the *Edinburgh Medical Essays*, art. 13, Dr. *Fothergill* tells us, that the *tartarus regeneratus*, or *terra foliata tartari*, given from half a Drachm to two Drachms, is an excellent Alterative and Diuretic. From three to six Drachms is a very mild Cathartic, that never sinks the Spirits, or raises any violent Disorder, and particularly is serviceable to dropical Patients. He then mentions the Case of a married Woman forty-eight Years of Age, who received great Relief by taking three Drachms of the *terra foliata tartari* once or twice a-Week for upwards of a Year, which gave her two or three loose Stools, with a large Evacuation of Urine, without exciting the menstrual Discharge, or affecting her Strength. Other Evacuants, both Diuretics and Purgatives, had been tried, but they produced a Discharge of Blood from the Vagina, which had sunk her prodigiously. Corroborants, especially of the astringent Kind, soon stopt the Flux, but at the same time contributed to increase the Swelling, by lessening the Discharge by

ε. As do many of the stimulating Medicines, Mustard-Seed, Leeks, Garlick, Squills, and others mentioned in Sect. 23. δ (g).

ζ. The

by Stool and by Urine. This Patient at last had her Days shortened by taking too rough a Purge.—In the *New Dispensatory*, which is intended as an Improvement on *Quincy*, part ii. ch. 8. p. 296, we are told, that two Drachms of the vegetable Alkali saturated with Vinegar, and taken in a liquid Form, without any Preparation, often gives ten or twelve Stools in hydropic Cases, and occasions a plentiful Discharge of Urine, without any Inconvenience.

(g) A Peasant having laboured long under an Ascites, and taken many Remedies without receiving any Benefit, was at last advised to eat Garlick; by the Use of which he made great Quantities of Urine, and was in a little Time cured of his Dropsy. *Burnet. Medic. Thesaur. lib. viii. sect. 12. subsect. 1.* He also adds, that he has seen several cured by this Remedy. See Histories such as this in *Forest. lib. xix. obs. 27.*

* * The late Dr. Young of *Edinburgh*, in a Letter to a Friend (a Physician in *London*) acquainted him, that he had often seen anasarcaous Swellings which accompanied asthmatic Complaints relieved by the Use of Garlick; and he related four Cases where the Swellings were entirely removed by the Patient's swallowing from two to six Cloves of Garlick in the Day.—Another Physician acquainted the same Gentleman, that he had seen great good Effects in

ζ. The same Effects are often produced by the Use of the natural Balsams; for Example,
Turpentine,

the Dropsy from the expressed Juice of the Roots and Tops of Leeks, taken to the Quantity of a large Wine Glassful Morning and Evening, which operated powerfully by Urine.—A hydropic Man cured by eating Onions. *Miscel. a. n. c. cent. 5 & 6 obs. 40.*—See Cases of the Effects of Bitters, Mustard-Seed, and other stimulating Medicines, in Notes to Sect. 23.—Dr. *Storck* of *Vienna*, in the Year 1763, published an Account of the Use of an Oxymel made of the Root of the Meadow Saffron (*Colchicum Autumnale*) in Dropsies. He relates thirteen Cases, nine of which, he says, were cured by this Medicine; the other four received Benefit from its Use. His Oxymel was made in the following Manner.

R. Rad. colchici autumnalis recent. in taleolas secti unc. i.

Aceti Vini lib. i. digere per 48 horas in phiala et cola, et dein

R. Colaturæ lib. i. mellis puri lib. ii. misc & coque leni igne ad mellis spissitudinem agitando cochleari ligneo.

Of this Oxymel he gave from a Drachm twice or thrice a-Day to two Drachms four times in the Day; its Use was continued from two to six Weeks; it operated as a strong Diuretic.

This Oxymel has been tried in *England*.—The late Dr. *Worleston*, Physician to her Majesty's Household, told me, that he had ordered it to several Patients in *Guy's Hospital*, but did not find it to answer what he expected from Dr.

Storck's

Turpentine, the Copaivy, Tolu, or Peruvian Balsams; as also by the Use of some animal Substances, such as Millipedes, and Cantharides in small Quantities (*h*).

«. Mercury

Storck's Account of it, nor did he think it near so powerful a Diuretic as the Squills.—In a Letter (dated *October 12, 1764*) I had from *my Father*, he says *Dr. Storck's Oxymel* was said to have answered wonderfully in the two first Patients it was given to at *Dalkeith*; but it has failed in several Patients, to whom it was given in *Edinburgh*.—I have ordered it to several dropical Patients in *St. George's Hospital*, but it did not act as a Diuretic, except in one Case, and there only in a small Degree, and the Patient received but little Benefit from its Use.

(*b*) A Scruple of Spirit of Turpentine with Tincture of Bezoar and red Coral, and forty or fifty Drops of Spirit of Sea Salt, brought away Urine from a Man in a Dropsy and quartan Ague, to the Amount of twice or thrice the Quantity of what he drank, and cured him. *Miscel. Curios. dec. 2. ann. 3. obs. 110.*—Turpentine with Spirit of Salt, some simple Waters, and Syrup, had the like Effect. *Ibid. dec. 3. ann. 4. obs. 74.*—To a Country Woman labouring under an Ascites *Dr. Russel* ordered the following Pills: *R. Milliped. ppt. drachm. ii. sapon. venet. unc. fs. gum. ammon. drach. ii. bals. sulphur. cum oleo terebint. q. s. ut fiant. pil. no. 80.* She took six or eight of these Pills every Day, and after them a Draught of the follow-

11. Mercury and its Preparations may be justly ranked among the Diuretics; for when

ing Wine: *R. sal. absinth. drach. i. sacchar. alb. drach. iii. ol. stillat. nucis moschat. gutt. vi. vin. albi lib. i. m. ut fiat vinum medicatum.* On taking these Medicines she voided sixteen Stones of an irregular Shape, about the Size of common Marbles that Boys play with; soon after she was seized with such a continual Flux of Urine, that the Waters flowed from her involuntarily in so great Quantities as to pass through the Bed and Chamber-Floor. The Patient was then restored by proper Cordials and Bandages, the Dropsy being almost in a Moment of Time absorbed and drained off by the Kidnies. *Russel on the Use of Sea-Water, sect. 2.*—The late Dr. *P. Shaw* used to esteem the Balsam Copaivi, mixed with the Lixivium Tartari in the Proportion of half a Drachm of the Balsam to a Scruple of the Lixivium, given in any common Draught, as a powerful Diuretic in Dropsies. And Sir *Edward Wilmot* used to recommend half a Drachm of the Sal Polychrest, mixed with fifteen Drops of the Oleum Juniperi by means of the Yolk of an Egg, in two Ounces of any common Julep, and given twice a-Day, as a good Diuretic in such Cases. If he gave it only once a-Day, he doubled the Dose.—Other Practitioners have joined Nitre and the other neutral Salts to the natural Balsams in various Forms.—*Hippocrates* recommends the Bodies of three Cantharides without the Heads, Wings, or Feet, bruised in Water, as a good Medicine in the Dropsy. *De Victu acutorum, sect. 66.*

given

given single, or mixed with other Medicines, it sometimes efficaciously promotes the Excretion of Urine (*i*).

§. When

(*i*) Quicksilver killed in Honey, Conserve, or some of the natural Balsams, was formerly a Medicine much used in dropfical Cases.—For a poor Woman about fifty Years of Age, whose Belly swelled in consequence of a scanty Secretion of Urine, I prescribed, after she had taken a hydragogue Purge, two Ounces of an Infusion of Juniper-Berries and Gentian in Ale, adding a little Spiritus Mindereri, to be taken Morning and Evening, and eight Grains of the mercurial Pill of the *Edinburgh* Dispensatory, at Bed-Time. The Use of these Medicines brought on a copious Discharge of Urine, and in a Fortnight's Time she recovered her Health.

* * * The late Dr. *Stevenson* of *Edinburgh* wrote some Years ago to a Physician, his particular Friend, that he had cured a Lady of seventy Years of Age of a Dropsy, by ordering her to take constantly for some time so much of a Quicksilver Pill as contained eight Grains of the Quicksilver, every Night at Bed-Time; and four of the following Pills three times a-Day: *R. Allii recentis drach. iii. G. ammon. sapon. venet. singulorum drachm. i. pulv. milliped. q. s. ut fiant pil. gr. v.* which were washed down with two Ounces of the following Infusion: *R. Ciner. genist. unc. v. limatur. mart. drach. vi. cort. cinam. contus. drach. iii. semin. coriand. drach. ii. semin. sinap. drach. iv. vin. Rhenan. aq. petrosilin. simp. singulorum lib. i (s. infunde*

3. When the Passage of Urine is obstructed by Sand or Stones, repeated Doses of the mineral Acids or lixivial Salts, properly diluted; Soap, Lime-Water, and other Remedies for calculous Disorders, are to be given.

per quatrimum et cola.—He mentioned likewise another Lady whom he had cured by the Use of the same Pills, and of Garlick, and some Doses of Rhubarb.—My Father ordered two or three Doses of Mercurius Dulcis to a Man who had an universal Anasarca and Ascites, which produced such a copious Discharge of Urine, as to remove his Complaints entirely in one Night.

In *January* 1762, I ordered three Grains of Calomel, Morning and Evening, to ——— *Carter*, a Soldier in the 11th Regiment of Foot, who laboured under an Anasarca, which had come after a Flux, and had yielded nothing to other Remedies. This Medicine proved strongly diuretic, and removed his dropfical Complaints.—A Physician told me, that he has cured two Dropsies by giving Quicksilver killed in the Balsam Sulphur. Terebinth. and made up into Pills with the Flour of Starch, and given from six or eight Grains to a Scruple at Bed-Time, and making the Patient take next Day from ten to fifteen Grains of Rhubarb. These Medicines acted as strong Diuretics, and at the same time kept the Body open. He said that this Medicine was much used, and strongly recommended in dropfical Cases, by the late Dr. *Brown of Inverness*.

4. The

1. The Cathartics recommended in Sect. 41, not only empty the Intestines, and cause a Flow of Liquors to them, but also often increase the Quantity of Urine, and when they are given either at the same time or alternately with Diuretics, are observed to increase their Operation.

2. Diuretics may also be assisted by relaxing Injections thrown into the great Guts, and by keeping the Loins warm while the rest of the Body is cool.

3. If the Remedies mentioned in this Section do not increase the aqueous Secretions, they will be prejudicial; for by dissolving the Blood they add to the Disease; and this Excretion of Urine is of such Consequence in Dropsies, that it may be said, in general, there is little Expectation of making a Cure while more Liquors are drunk than are passed off; and *Celsus* (*k*) observed long ago, that when the Urine is in

(*k*) “ Si plus humoris excernitur quam assumitur, ita de-
 mum secundæ valetudinis spes est. *Cels. lib. iii. cap. 21.*
 greater

greater Quantity than the Drink, the Physician may hope for Success.

43. The Skin of dropfical People is generally dry, the perfpirable Liquor being poured into the hydropic Cavities ; if therefore the Excretion by the Skin be increafed, a lefs Quantity of Fluid is conveyed into the Cavities to increafe the Difcfe, and the Blood is freed from a Redundancy of Water. To obtain this,

a. The Method prefcribed by *Celfus* is certainly very rational (*l*) : “ Sweat, fays he, is to
“ be promoted, not only by Exercife, but like-
“ wife in warm Sand (*m*), a Bagnio or Stove
and

(*l*) “ Evocandus eft fudor non per exercitationem tantum, fed etiam in arena calida, vel laconico vel clibano, fimilibusque aliis ; maxime enim funt utiles naturales & ficcæ fudationes.” *Celfus, lib. iii. cap. 21.*

(*m*) *Dampier* in his Voyages relates, that being ill of a Dropsy in the Ifland of *California*, he covered himfelf all over with Sand, warmed by the Heat of the Sun, for an Hour ;

“(n), and other such like Contrivances ; for
“ natural and dry Sweating is very useful.”

b. Friction as well as Exercise is universally known to promote Perspiration.

c. So also do the Stimulants recommended in Sect. 23 *d* ; especially those which are composed of a subtile Oil and volatile Salt (o).

d. The

Hour ; then he was carried to Bed and well covered with Cloaths, where he fell into a profuse Sweat, after which he recovered daily.

(n) A Patient afflicted with an Hydrops Pectoris and Ascites, was cured by sweating plentifully in a Stove prepared with Spirit of Wine, living on a sudorific Diet of Guaiac and Sarsaparilla for twenty Days, and taking a hydragogue Purge every fourth Day. *River. Obs. cent. 4. obs. 71.*
—It is probably the warm Steam in the Grotto *delli Serpi* near *Rome*, that cures Dropsies and many other Diseases ; although the Effect is attributed to the Licking and Suction of Serpents. See the History of the Cure of a Dropsy by this Cave, *Miscel. Curios. a. n. c. dec. 3. ann. 4. obs. 20.*

(o) *John Tackler*, afflicted with a Dropsy, sweated profusely, and discharged a great Quantity of Urine, by the
Use

d. The natural Balsams act nearly in the same Way.

e. Mercury, and several of its Preparations, frequently open the Pores of the Skin and promote a plentiful Diaphoresis ; especially if proper Care be taken to direct their Operation this Way.

f. Antimony, and its Preparations, readily affect the Skin, and increase the cutaneous Excretions (*p*).

g. And

Use of Spirit of Sal Ammoniac ; the Swelling having subsided, the Remains thereof were carried off in a few Days by a Dose or two of a Hydragogue Purge. *Binninger, cent. 1. obs. 76.*—The Decoction of the Rad. Vincetoxicum (Swallow-wort) is strongly recommended as a Sudorific in the Dropsy. *Miscel. Cur. a. n. c. dec. 2. ann. 7. obs. 38.*

(*p*) Sydenham has recommended strongly the Crocus Metallorum given by way of an Emetic in the Ascites where the Belly is large, *de Hydrope.*—And Dr. *Poter* mentions his having cured one *Antony Maria* of an Anasarca and Ascites, by ordering him some of the Sulphur Metallorum with the Elixir of Vitriol. It soon gave him Relief, and
within

g. And Opium, either by itself or differently prepared with other Medicines, produces the same Effects (*q*).

b. These

within twelve Days his Belly and other swelled Parts were much decreased, having evacuated a Deal of Water both by the Mouth and the urinary Passages, and in a little Time was cured. Dr. *Poter* gives great Praises to this Medicine the Sulphur Metallorum, and mentions several other Cases he cured by it. See *Hoffman Oper. Supplem.* p. 1. cent. 1. obs. 2. 97. cent. 2. obs. 12. 75. cent. 3. obs. 36. 37. 97.

(*q*) A Woman gave to her Husband labouring under a Dropsy fifteen or twenty Grains of Laudanum; he broke out into a profuse Sweat, passed a great Quantity of Urine, and was cured. *Hist. de l'Acad. des Sciences*, 1703.—A Gentleman who was much troubled with nocturnal Pains from an ill-cured Lues Venerea, for which he would take nothing but a little Laudanum to ease his Pain, at length fell into an universal Dropsy; and being averse to Medicines, he sent for Dr. *Willis*, to know if he might take Laudanum in this Distemper, so as to keep him easy: the Doctor consented to it, after giving him proper Cautions, and went away, not expecting he would live many Days. The Patient immediately took a large Dose of Laudanum, which he continued to increase every Day till the Quantity was almost incredible. In a Month's Time all his dropical Swellings

b. These two last named Medicines, the Antimony and Opium, have often a better Effect

Swellings were gone, his nocturnal Pains left him, he had a good Appetite, and was able to walk abroad. The Opium sweated him plentifully every Night, and made him pass a large Quantity of Urine. *Willis Pharm. Ration. p. 1. sect. 7. cap. 1.*

The following Case I had from Dr. *Knight*. A middle-aged Man, after a quartan Ague, was taken with an Ascites, and being swelled all over was received into the *Westminster* Infirmary. A Number of Purgative and other Medicines were given him, which did not at all relieve him; and there seemed to be little Hope of his Recovery. Dr. *Knight* ordered him a Dose of *Dover's* Opiate Powder, which sweated him plentifully, and relieved him greatly; he continued the Use of this Medicine for two Months with the same Success, his Swelling all the while diminishing considerably; but at the End of this Period the Powder had no more Effect, and his Disease seemed to be at a Stand. The Doctor then ordered him to take a Purgative alternately with the Powder; which Course relieved him also but little till he was bandaged pretty tightly all over: the Medicines then began to have a good Effect; and by continuing this Course, and drawing the Bandages tighter as the Water was evacuated, a compleat Cure was made in a short Time. The Doctor saw the Man four or five Months afterwards in good Health, and believes he has had no Relapse.

when

when mixed, than when either of them is taken separately, especially the antimonial Wine and Tincture of Opium (r).

i. That these diaphoretic or sudorific Medicines may have a proper Effect, their Operation must be assisted, not only by excluding the cold Air, but also by keeping the Surface of the Body warm with thicker Garments, and a greater Quantity of Bed-Cloaths than usual, as

(r) The antimonial Wine mixed with Tincture of Opium is now a Medicine much used in *St. George's Hospital*: I have often given it as a Sudorific, which Intention it answers effectually, and does great Service in rheumatic Cases.— To a Woman about forty, afflicted with a Dropsy of the incysted Kind for several Years, which had distended her Belly to an enormous Size, and seemed to proceed from a scirrhus Ovarium, I ordered thirty or forty Drops of Laudanum in an Ounce of Pepper-Mint Water, first with half a Drachm of the Lixivium of Tartar, and about two Months afterwards, when the Medicine seemed not to produce its usual Effect, with fifty Drops of the antimonial Wine: she took this Medicine as oft as she found her Belly begin to grow larger, and was always relieved, the Perspiration and Discharge of Urine being greatly increased by its Use.

well

well as with warm Drink, and fomenting the Skin with Steams of hot Water, or rather with the Vapour of burning Spirits of Wine; or by rubbing the Body with warm Flannel well impregnated with aromatic Fumes, when an increased Perspiration without Sweat is intended.

44. Although a Salivation raised by Mercury greatly weakens the Patient, and dissolves the Humours into an aqueous Mass, yet it is said to have cured a Dropsy (s): when there-

(s) A Man between twenty-five and thirty Years of Age was attacked with an Ascites and Anasarca, and finding no Relief from any other Means used for his Recovery, was cured by being tapped and salivated. Recourse was had to the Salivation, because neither the Puncture, nor any Medicines which had been given him, removed the subcutaneous Swellings. *Du Verney, Memoir. de l'Acad des Sciences, 1703.*—A Woman labouring under a Dropsy was cured by an accidental Salivation, raised by Mercury mixed with purging Pills, which continued fourteen Days. *Miscel. Curios. dec. 2. ann. 4. obs. 36.*—An hydropic Woman was greatly assisted in her Cure by a Salivation. *Act. Phys. Med. a. n. c. vol. v. obs. 3.*

fore

fore this Distemper has baffled other Remedies, Salivation may be tried.

45. In Dropsies every Discharge of watery Fluids is not to be esteemed beneficial ; for if these are only separated from the Blood without any Diminution of the hydropic Swelling, which alone is the sure Sign that the desired Absorption has been made, the Patient's Strength is exhausted, and his Blood dissolved ; so that the Cure of the Disease is so far from being advanced by such Excretions, that, on the contrary, the Case must be rendered worse.

46. In the few Cases where there are other natural Passages than those now treated of to be opened, it is plain that the Methods of Cure must be varied according to each particular Case ; which shall be considered in the second Part of this Essay.

47. The like Variety of Management being required in different Dropsies where artificial

G

Outlets

Outlets for the Water are to be made, I must not at present enter into any Detail concerning them.

48. When hydropic Water is let out either by the natural or artificial Passages, especially if it be done suddenly, the Pressure of the Water on the Sides of the Cavity in which it was contained, and on the neighbouring Organs, is taken off; wherefore the Liquors from the Heart finding less Resistance here to their Flow than in other Parts, will overstretch all these Vessels where the Pressure is diminished, and produce Inflammation or Gangrene in the smaller Vessels (*t*), and the Effusion of Liquors where they have any Apertures (*u*). At the same

(*t*) Histories of Inflammations or Gangrenes coming soon on the Bowels, after performing the Paracentesis incautiously, may be read in *Miscel. Cur. a. n. c. dec. 2. ann. 6. obs. 152.*—*Philos. Transf. No. 223.*—*Bonet. Sepulch. Anat. lib. iii. sect. 21.*

(*u*) More Water is collected in the Abdomen in one Week after tapping than fix before it.—Hydatides opened often

same Time the other Organs of the Body being deprived of their due Proportion of Liquors will become unfit for performing aright their Functions; and hence a Difficulty in Breathing, Weakness and Faintness, Loss of Appetite, bad Digestion, and such other Symptoms, are the common Consequences of a sudden Evacuation of hydropic Waters from large Cavities (*w*).

49. These

often discharge as much in a Day or two, as was formerly collected in them during Months or Years.—The Water which was clear and limpid at a first Tapping, is frequently bloody at a second.

(*w*) People labouring under the Dropsy often die suddenly when they seem to be in a fair Way of Recovery, and the dropical Swellings to diminish daily; nay, often after a seeming Cure. Many Instances of which we meet with in *St. George's*, and other large Hospitals. I have had the Bodies, of severals who died in this Way, opened.

In some no Water was found in the Cavities, nor any visible Fault in any of the Viscera, or other Organs, which we could assign for the Cause of Death; and we could only Conjecture, that either the Water had so macerated and relaxed the Fibres, as to render them unfit to perform longer the vital Functions, or that the sudden Evacuation of the Water had occasioned the Death of the Patient.

49. These bad Consequences of taking away hydropic Waters are to be prevented, 1. By

In several I have seen Water in the Cavities of the Thorax, and Signs of Obstructions of the Lungs——In others Faults of the other Viscera.

In some I have observed large Polypous Concretions in the Heart, and large Blood-Vessels, which seemed to have been recently formed, and which, in some Cases, I have conjectured to have been the Cause of the sudden Death of the Patient.—A Case of this Kind occurred lately, *William Ritching*, twenty-two Years of Age, whose Father and two Brothers had died of the Dropsy, was admitted into *St. George's Hospital* the 14th of *November 1764*, for an universal Dropsy. By having Scarifications made in his Legs, and the Use of diuretic and purgative Medicines, the Swellings gradually decreased, and he seemed to be in a fair Way of Recovery, when, on the 7th of *December*, he died suddenly, at Nine o'Clock in the Morning, after a calm Night's Sleep, and having eat some Water-Gruel about half an Hour before.—His Body was opened next Day: The Brain was found and firm, and there was no more Water than common in its Ventricles, or on its Surface. The abdominal Viscera were all found, and but a very small Quantity of Water in the Cavity.—The right Cavity of the Thorax contained above a Quart of Water, but did
not

By letting out the Water slowly, and in small Quantities at a Time, that the Pressure may be taken off very gradually.—2. By making as great a Pressure on the Part from which the Water is discharged as was occasioned by the Fluid while it remained within the Body.—3. By applying some of the strengthening Medicines taken Notice of in Sect. 23.

INDICATION III.

50. Tho' the two first Indications may have been successfully pursued, so as to have drained off all the extravasated Water, yet the third Indication of preventing a Relapse is not to be

not appear so full as to have been the Cause of Death. The Lungs adhered a little to the Pleura in this Side, and in one Part was full of Blood, and about a square Inch was black, and seemed concreted almost to a solid Mass, tho' when cut out of the Body it swam in Water. There was but a small Quantity of Water in the left Cavity. The Heart was very large, and both Ventricles full of yellow polypous Concretions, which extended into the large Vessels, and which, tho' they were pretty firm, seemed to have the Appearance of having been recently formed.

forgot; for there are few Diseases into which Patients are so liable to Relapse as the Dropsy. Whoever therefore has once had a Dropsy must be particularly on his Guard against a Return of it.

51. Persons in this Condition ought to persist long in the Use of Corroborants, and such other Medicines as lessen the Disease, gradually forbearing Evacuations, and increasing the Doses of the strengthening Remedies, till the natural Tone of all the Organs is restored; then the cold Bath, which was said to be improper while the Dropsy continued, may be successfully employed for bracing the Solids sufficiently.

It will be readily understood, that in the Dropsy from Rigidity, (Sect. 28.) where a peculiar Method was proposed, there is an Exception to the Rule above mentioned.

52. Besides the general Method now proposed, special Regard is to be had, 1. To the original

original Cause of the Dropsy; the Increase or Return of which is to be guarded against.—

2. To the Part more immediately affected; for the Sides of the Cavity ought to be compressed, supported, and strengthened, till their Fibres and Vessels have recovered their proper Strength and Tone.

53. If the morbid Cavity can be destroyed or filled up, without Danger or very great Inconvenience to the Patient, it is adviseable to do it, as in many Cases there is no other Method of preventing a fresh Collection of Water.

54. A particular Recital of those Symptoms that frequently attend Dropsies, or might be brought on by them, but are not necessary Consequences, or constant Concomitants of this Disease, are purposely omitted, as they would lead us into too large a Field of Inquiry foreign to the present Subject.

55. In the preceding Part of this Essay it was hinted, that the general Account of this Disease was not sufficient to direct us to the

Cure of its different Species ; we shall therefore now proceed to a more particular Description of the different Kinds of Dropsies, which will be the more clearly comprehended, if the general Doctrine already proposed be kept in View.

P A R T

P A R T II.

Of the different Kinds of D R O P S I E S.

56. **T**H E Waters of Dropsies are contained either in Cavities which have a free Communication with others, or in such as have no direct or natural Outlet. Hence the Division into diffused and incysted Dropsies.

C H A P. I.

Of the DIFFUSED D R O P S Y.

The Seat of the Disease.

57. The Principal, if not the only, Seat of the diffused Dropsy, is that cellular membranous
Substance

Substance which is to be found every where under the Skin, about the Muscles, Blood-Vessels, Nerves, Bowels, and which, in short, seems to serve as a general connecting Medium to all the Parts of the Body.

58. This cellular Substance consists of extremely small, pellucid, ductile and elastic Membranes; in some Places it is dense, and in others loose, and in some Parts it is of a fine, in others of a coarse Texture: and tho' we cannot demonstrate either Vessels or Nerves proper to its Lamellæ, nevertheless innumerable large Vessels, both arterial and venous, as well as smaller exhaling and absorbing Tubes, with Abundance of Nerves, are dispersed through every Part of it. Between these Membranes are Spaces of an irregular Figure, and of very different Sizes, opening into each other ($\propto$), and commonly called Cells; into these

($\propto$) Do all the Cells of the Tunica Cellulosa communicate with one another universally through the human Body, and is the Water of anasarca Dropsies equally dispersed through

these the Arteries are constantly pouring Liquors, which are again reassumed into the Blood by the Extremities of absorbent Veins.

59. Many

through them? Or are there two Sorts of cellular Membranes, the one which may be called Reticular, into which the mere watery Liquors are secreted, and in which drop-fical Water is lodged; the other, which may be called Adepose, into which the Fat is deposited, and into which the Water of Dropsies never enters?

Till we know more of the intimate Structure of animal Bodies, we cannot determine these Questions with Certainty.

The first is the most general received Opinion, nor are the Arguments of our not being able to squeeze the Fat from one Part to another, or of its not falling down into particular Parts, sufficient Proof of the contrary; for we are not to expect that where there is a thick dense cellular Membrane, and small Cells filled with a gross Fat, and the Communications between these Cells but small, that we can be able by external Pressure to squeeze this Fat from one Cell to another, in the same Manner as we would do Water, liquid Oil, Air, or any other such Fluid, thrown into the most loose Part of the cellular Membranes; far less are we to imagine that the gross Oil, after it has acquired the Consistence of Fat, will fall down by its own Weight into the cellular Substance of those Parts where
Nature

Many of these Cells we find filled with a gross Fat, others with a fine Oil; in others we observe a viscid, in others only a fine watery Liquor: Nature having furnished every Part

Nature has intended that no Fat should be lodged.—And although it be true, that in many Parts of the human Body there seem to be particular Organs fitted for secreting and preparing the gross Oil called Fat, whether Glands according to *Perrault*, *Collins*, and others, or Adepote Sacculi according to *Morgagni*, or Vessels of certain Diameters according to *Ruysch* and *Haller*; and that in other Parts of the Body, such as the Eye-Lids, Scrotum, &c. there seems to be no such particular Structure, yet we cannot conclude from thence that the Water of Dropsies is never lodged in the same Cells with the Fat; or affirm with Certainty, that there is no universal Communication between the Cells of the Tunica Cellulosa. Water or Air drove forcibly into the cellular Membranes seems to fill all the empty Cells, and dropical Disorders consume the Fat in the cellular Membranes, and the Marrow in the Bones; and these Cavities are often found after Death full of a watery instead of an oily Liquor.

Whoever would know more of the Structure and Use of the cellular Membrane, and the different Opinions that have been *proposed* concerning it, may consult the ingenious Dr. *Haller's Elementa Physiolog. lib. i. sect. 2.*

of

of the animal Body with Organs for preparing such Liquors as were most fit for its Use.

SYMPTOMS.

60. The Description of a Dropsy already given in Sect. 4.—10. answers to the diffused ones, allowing for the Appearances arising from the Nature of the cellular Membranes in which the Water is contained : Thus,

a. The very small Quantity of Water contained in each Cell can scarce fluctuate so much under the Finger as to impress it with the Sense of an undulatory Motion ; but by Pressure the Water may be squeezed into the neighbouring Cells : by these Means a small Hollow or Pit is made, which is slowly and gradually filled up again when the Pressure is removed.

b. The Water by its Weight descends thro' these Cells towards the lower Parts, which therefore are generally more swelled and distended than those above.

c. The

c. The Symptoms of this Disease, in most of the deep-seated internal Organs, not being observable either by the Eye or the Finger, we can only judge such Parts to be affected by the Constitution of the Patient, and the Injuries which the different Functions may have sustained.

CAUSES and PROGNOSTIC,

61. The Causes of the diffused Dropsy are enumerated in Sect. 11.—18. and the Prognostic is to be made according to the Circumstances hinted in Sect. 19.

CURE.

62. Nor is any Circumstance to be changed in the Indications of Cure related in Sect. 20. But in the Therapeutic Part it may be worth while to observe, that the Absorption from the cellular Membrane is more easily performed than from any of the Cysts, because its Veins are larger and more numerous, and the Sides
of

of its Cells have generally less Pressure on them than the Cyfts have ; hence, *cæteris paribus*, the diffused Dropsy yields sooner to Medicines than the incysted.

Its different SPECIES.

A N A S A R C A.

63. The most frequent and manifest Kind of the diffused Dropsy is the subcutaneous, called by the Latins *intercus*, and by the Greeks *ανασαρκα*, or *λευκοφλεγματια* (y).

64. When this Disease depends on the Causes mentioned in Sect. 12.—15. the Feet begin first to swell, especially in the Evening,

(y) *Aretæus* makes a Difference between the Leucophlegmatia and Anasarca ; but we use the Words Anasarca and Leucophlegmatia indifferently, for they seem to be but different Stages of the same Disease. He says, that when the Body is swelled with a thick white Pituic, the Disease ought to be named Phlegmatia, but when the Flesh is dissolved into a bloody thin watery Humour, it ought then to be called Anasarca. *Lib. ii. cap. 1.*

after

after Exercise, and when the Patient has stood or sat long; which Swelling rises frequently to the Thighs.—By lying in Bed the Swelling becomes less, or even almost imperceptible.—The Reason of these Appearances may be easily understood when one considers, what was before hinted at, that as the Cells in which this watery Fluid is deposited, communicate with each other, so of Course this Fluid descends by its own Weight to the inferior Parts. To this if we add, that in an erect Posture the high Column of Blood contained in the Aorta, and inferior Vena Cava, presses upon the Vessels of the lower Parts, and makes the Return of the Blood from thence to the Heart more difficult; and that under such Circumstances as commonly produce the Anasarca the vascular System is greatly relaxed; and that, by these Means, the Power failing which should promote the Ascent of the Blood from the lower Parts, it moves with more Difficulty, and the thinner Parts are by this additional Delay forced into the smaller Ramifications of the Arteries, which
empty

empty their Contents into the cellular Substance. But when a Person is laid horizontally, the Height of the Column of Blood in the returning Veins is shortened; the Blood flows with less Difficulty, and the Pressure being removed, the Power of Absorption is restored, whilst a less Quantity of Moisture is forced through the exhaling Vessels (z), and therefore the Swellings decrease.

65. In the Progress of this Disease the Swelling rises to the Hips, Loins, and Belly, extends itself to the Thorax, and at length to the Hands and Face; so that the whole Body is affected by it, the most depending Parts being always the most enlarged.

66. An Obstacle of any Kind being once made to the Return of the Blood by the Veins

(z) If *Hoffman's* Observation of tall People being more subject to this Kind of Dropsy than those of a low Stature, be true, it is a Kind of Confirmation of the Doctrine here laid down. *De Hydrope, cap. 20.*

H

from

from any Part of the Body, that Part soon becomes anasarcaous, or, as it is most commonly termed, œdematous ; and the dropfical Swelling extends itself gradually in Proportion to the obstructing Cause, tho' all the Organs of the Body are in a natural sound State ; thus an anasarcaous Swelling may be brought on the Limbs by compressing the inferior Vena Cava or the Iliac Veins ; or on the Arms or Head by compressing the superior Cava. A Schirrus in the Arm-Pit often Causes the Arm to appear extremely œdematous.

67. Watery Tumors may be produced wherever there is a preternatural Laxity of the Solids, or when the Circulation of the Blood is obstructed in the capillary Arteries : such Tumors therefore are often the Consequences of Palsy (*a*), Bruises, Sprains ; but the Swellings from Erysipelas, the Poison of the Viper, Bites of Insects, &c. though they seem to partake

(*a*) See a Dropsy from Palsy, *Hoffman Supplem. cent. 1. obs. 97.*

of the œdematous Nature, yet they more properly belong to another Class of Diseases, than those treated of here.

68. The Head and Scrotum are the only two Parts of the Body on which, when distended with the subcutaneous Dropsy, Authors have been pleased to bestow particular Names. To the former they have given the Name of Hydrocephalus, and to the latter Hydrocele. But in speaking of these two Sorts of Dropsies it is always right to add the Epithets of subcutaneous or external, to distinguish them from the other Kinds of Dropsy to which the Head and Scrotum are subject, and of which there will be Occasion to treat in the following Part of this Essay.

69. As the Water of a subcutaneous Dropsy stretches the Skin, presses on the Blood Vessels, Nerves, Muscles, &c. and relaxes all the Parts it touches; the Heat of the Body, the contractile Power of the Muscles, and the Tone of the Vessels, are all thereby considerably di-

H 2

minished;

minished ; and the Skin becomes so insensible, that it has been sometimes burnt without the Knowledge of the Patient (c), whose own Weight at last becomes a Burthen greater than he can support.—The Vessels under the Skin being by this Pressure so straitened as to be incapable of transmitting their Liquors to the Heart, discharge them into improper Places ; hence are frequently produced the red Spots and Blotches observed on the Skins of hydropic People.—The diffused Water too, by pressing universally on the Vessels, increases the Resistances to the Force of the Heart, which of Con-

(c) A labouring Man who seemed to be almost drowned by Water under the Skin, having his Thighs as thick as an ordinary Man's Body, being very cold in the Winter, lay down by the Fire to warm himself, and, by Accident, putting his Foot against the hot Coals, tho' he felt no Pain, was so much burned that the Water was totally evacuated in three Days Time thro' the Aperture made by this Accident ; and he was so much reduced in Size that his Skin hung loose about him : but he recovered his Health by what at first seemed to be a Kind of Misfortune. *Boerhaav. Comment. in sect. 416. Institut. Med.*

sequence

sequence becomes unequal to its Task of propelling the Blood thro' the Body ; and therefore the Blood is collected mostly in the large Vessels about the Heart and in the Lungs, where it causes Anxiety, short and difficult Breathing, especially when, from a little Motion or Exercise, the small Portion which finds a Passage thro' the other Parts of the Body, is forced to return to the Heart somewhat more quickly than ordinary.—Sometimes the Water distends and dilates the Pores of the Skin so much, that thro' them it makes its Way out of the Body (*d*). But if it passes thro' the Vessels of the Skin only, and not thro' the Cuticle, it raises Blisters, which being broke the Waters run out plentifully (*e*).—When the Circulation is wholly stopped in any Part, by the Pressure of the Water, a Mortification ensues. Or, when the extravasated Liquors become acrid or putrid, they erode the

(*d*) & (*e*) I have seen several Instances of both ; there are remarkable Examples of the former in *Miscel. Cur. a. n. c. dec. 2. ann. 9. obs. 136.*—*Ibid. an. 3. obs. 136.* and of the latter *ibid. dec. 2. ann. 10. obs. 34.*

Fibres to which they are contiguous ; and if any Part of this acrimonious Fluid be taken up by the absorbent Vessels and mixed with the circulating Fluids, it causes Thirst, Heat, Fevers, and their numerous Consequences.

70. A general Anasarca never is without a Collection of Water in the cellular Membranes surrounding the Viscera ; this must occasion some Disorder in their Functions, from whence various other Symptoms arise, which shall be enumerated when we come to consider the different Sorts of internal diffused Dropsies.

71. As every Kind of Dropsy has something peculiar to itself, and probably yields more to some particular Class of Medicines than to others, in treating of the Management of each, those Medicines shall be more expressly considered whose Effect may be generally depended on, in the Species of Dropsy then treated of, whilst the others are only casually mentioned.

72. *a.* Those corroborating or strengthening Remedies that increase Absorption when externally applied do more Service in the subcutaneous Dropsy than in any other Kind, because they can be applied almost to the Seat of the Disease ; and therefore Friction, the stimulating Fumes (*f*), Aromatic (*g*) and spirituous Medicines

(*f*) *R. Pulv. benzoin. q. s. vel R. thur. succin. ana p. ae. misce, fiat pulvis ; paulatim carbonibus incensis, intra caminum injiciatur, et fumus excipiat panno laneo, donec bene caleseat pannus, cuti mane et vespere affricandus.*

(*g*) *R. Pulv. subtl. summit. absinth. unc. iv. cret alb. unc. viii. misce. Pulvere hocce aspergatur pannus, quo circumligandae sunt partes hydropicae, h. s.—vel R. pulv. subtil. cinamom drach. i ss. nucis moschat. drach. ii. camphorae scrup. ii. misce. Admisceatur hicce pulvis cum gossipio, inferendo inter duplicatum linteum, ex quo conficiantur tibialia, vel manicae, funiculis adstringendae.*

(*h*) *R. Spirit. vini camphorat. unc. iv. spirit. volat. aromat. drach. i. misce. Affricetur, q. s. parti tumidae bis in die.*

The following Case was sent by the Patient's Daughter to a Friend, from whom I had it.

cines (*h*), or other external Remedies, are frequently found to have a good Effect, and ought to be assiduously employed.

b. Bandages are extremely proper and beneficial in assisting the Tone of the Parts, and for preventing the Influx of Fluids into the cellular Substance, and expelling Water from them, and in promoting the Cure. However, Care ought to be taken not to apply them too

A Gentleman of Fortune near eighty Years of Age, after two severe Fits of Illness, fell into a Dropsy, and swelled all over; he was asthmatic, low and weak, and thought to be a dying, when he was advised to have Cabbage or Colewort Leaves applied to his Legs. The hard Stalks were cut away, and the Coleworts were rolled with a Rolling-Pin to make them soft, and applied fresh twice a Day—By Degrees they began to draw the Water, and to discharge it from his Legs, and his Breathing became easier.—The Discharge was computed to be about a Quart in the Day; it at first kept him low, but as it lessened he recovered his Strength, and his Body had lessened 13 Inches, and he was able to lie down in Bed, which he had not been able to do for some Years before; and in *May* 1764, he was able to walk with a Stick, to dine at Table with his Family, and to go out an airing in a Coach. In *November* he made a Journey of near two hundred Miles, and was in good Health.

tight,

tight, lest we stop the free Circulation of the Blood in the Parts lower than where the Bandages are applied, and occasion an Increase of the dropfical Swellings of these Organs, or give Rise to dangerous Inflammations and Obstructions.

c. Diaphoretics and Sudorifics act chiefly on the Vessels of the Skin, and frequently produce very good Effects ; whether Heat alone, or Stimulants (*i*), or antimonial Preparations (*k*), or Mercurials (*l*), or Opium (*m*), or other

(*i*) R. Spirit. corn. cerv. unc. dimid. cujus aeger sudationi accinctus hauriat gutt. lxxx. in quovis liquore vinoso tepido, et gutt. xx. omni postea quadrante horae.—vel R. Fulep. e camphor. lib. ss. tinēt. serpent. unc. i. misce. Propinanda est primo uncia una, et postea unc. dimid. omni semihora ad tres vel quatuor vices.—vel R. Spirit. minder. unc. viii. sal. vol. c. c. gr. xl. syrup bals. Tolutan. unc. ii. misce : hauriat unc. ii. statim cum in lectum se receperit, et unciam unam omni dein hora dimidia.

(*k*) R. Vin. antimon. unc. dimid. capiat gutt. xl. in seri lactis vinos. tepid. unc. ii. et reit. dosis omni hora si ferat ventriculus.—vel R. Kerm. mineral. gr. ii. theriac. andromach. drach. i. misce pro dosi.—vel R. Antimon. calcinat. ad albedinem cum aequali copia

other Medicines, are employed for this Purpose (n).

73. Either

copia rasur. corn. cerv. gr. xxx. cap. pro dosi.—vel R. Vin. antimon. gutt. xl. tinct. thebaic. gutt. xxx. cap. dos. hujusmodi 8va quaque hora, ex quovis liquore tepido.

(l) *R. Turpeth. mineral. gr. i. mithrid. scrup. i. ol. stil. menth. gutt. iii. misce pro dosi.—vel R. Mercur. dulc. gr. iv. camphor. gr. vi. opii gr. ii. misce & cap. sudori accinctus.*

(m) *R. Pulv. castor. gr. xv. sal. succin. gr. v. sal. vol. c. c. gr. vi. opii crud. gr. ii. syrup. e cortice aurant. q. s. ut fiat bolus h. s. devorandus.—vel R. Tartar. vitriol. sal. nitri, ana scrup. iv. funde in crucibulo, pulveriz. et adde pulv. rad. ipecacoan. opii singul. scrup. i. ol. stil. menthae gutt. ii. misce. Dosis est a scrup. i. ad gr. xl. This is Dover's Powder, formerly mentioned.*

* * A Soldier of the second Regiment of Foot-Guards, who had undergone repeated Salivations for venereal Complaints, caught Cold, and swelled all over in a short Time after. He had a Difficulty of Breathing, a Paucity of Urine, and the other Symptoms of a Dropsy. The Surgeon of the Regiment at first ordered him hydragogue and diuretic Medicines, which gave no Relief. He then brought him to the Physician, to whom I am obliged for this, as well as for several other Cases taken Notice of in this third Edition. As the Man was young, and his Pulse full, the Doctor ordered him to be bled, and to have
some

73. Either at the same Time, or alternately with these Remedies, the Corroborants, Diuretics,

some Doses of *Dover's* purging Electuary, which had little Effect. He then ordered him the following Medicine, to be taken by Spoonfuls till it both vomited and purged him :
R. Syrup e spina cervin. unc. ii. tartar emetici gr. x. He took the whole before it produced any Effect; but it then operated very much both as an Emetic and Purge, and relieved the Breathing greatly. Next Morning he had a Scruple of *Dover's* sweating Powder, which sweated him freely, and gave Relief. The third Day he had the purging Medicine as before, but the Half operated freely. The fourth Day he had half a Drachm of the sweating Powder, which he took divided into two Doses, at half an Hour's Interval between each, and sweated as before. After taking these Medicines three Times each, he was observed to be better. He then continued to take these Medicines alternately for six Weeks, but intermitted two Days between each Operation. On the intermediate Days he was allowed a Dram of Gin, which he observed to increase his Discharge by Urine. It is to be remarked, that when he began to take the Syrup of Buckthorn and Tartar Emetic at longer Intervals, he was only vomited, and without drinking threw up great Quantities of green-coloured Water. By this Course the Swellings were all removed, and the Cure was completed by his taking forty Drops of the Elixir Vitrioli in Bitters to restore his Strength.

In

retics, and Purgatives, recommended in the first Part of this Essay, ought to be prescribed (o).

74. Al-

In two Months he seemed recovered, but, on catching Cold about ten Months after, was threatened with a Relapse, which however was prevented by two Doses of the emetic Cathartic. He lived three or four Years after this, and then died of a Fever.

(n) Hot Bricks applied to the Feet sweated them, and cured œdematous Legs remaining after an Ague. *Miscel. Cur. a. n. c. dec. 2. an. 8. obs. 141.*—The Fumes of Gentian, Juniper Berries, and Vinegar, cured a Dropsy. *Ibid. dec. 3. an. 9 & 10. obs. 24.*—An hydropic Child was cured by sweating. *Ibid. obs. 197.*

(o) Since the first Part of this Essay was printed I received from Mr. *Hutcheson*, Practitioner in Physic at *Dalkeith* near to *Edinburgh*, an Account of ten dropfical Cases in which he gave Dr. Stork's *Oxymel Colchici*.

Two anasarcaous Cases of some standing, and one recent œdematous Swelling in a Child, were perfectly cured by the Use of this Medicine.

In another anasarcaous Case it increased the Secretion by Urine, but did not lessen the dropfical Swelling. In three others it had no sensible Effect.

It

74. Although the Remedies hitherto proposed may have been duly administered, yet the

It increased the Quantity of Urine, and cured a Girl of twelve Years of Age, whose Belly was so much swelled that Part of the Water had ouzed out at the Navel.—It increased the Quantity of Urine in another ascitical Case, and it had no Effect in a third, where the Water was carried off afterwards by the Patient's taking five Grains of Mercur. Dulcis at Night, and purging it off next Morning with a Dose of *Ward's Dropsy Powder*.

Mr. *Hutcheson* says none of his Patients used any other Medicine when taking the Colchicum; and that it proved a very strong Diuretic with the two first Patients, who took it the length of ten Tea Spoonfulls in the Day; with the others it operated but slowly.

In the Month of *June* 1755, *Robert Damyerin*, a strong young Man, was taken into *St. George's Hospital* for an Anasarca by Dr. *Dawson*, who ordered him dry Diet, a Purge of Jalap and Nitre twice a-Week, and to take in the intermediate Days the Squill Pills and saline Draughts. By the Use of these Medicines his Swellings were all carried off in about five Weeks; he made Water freely, and sweated often; and afterwards, by the Help of some strengthening Medicines, the Cure was completed.—*John Mackan*, a Man thirty Years of Age, was admitted into
St.

the Anasarca may increase, and the extravasated Water remain in the cellular Substance unless

St. George's Hospital the 14th of February 1759 for anasarcaous Swellings of his Legs and Thighs, which had come some Months before from drinking small Beer while he was very hot. His Pulse was quick, his Tongue white, and he made but a small Quantity of high-coloured Urine. He was ordered the saline Draughts three Times a-Day, and a Dose of Jalap and Nitre twice a-Week. This Course, in about seven Days, restored the natural Secretion by Urine, and removed his dropfical Swelling; and he was discharged the Hospital, seemingly in good Health, the 25th of the same Month.

* * Some Years ago a Physician of Eminence was called to a Lady forty-two Years of Age, who had been attacked with anasarcaous Swellings of her Belly and Legs, a Paucity of Urine, and other Symptoms of a Dropsy, after a Miscarriage. The Doctor at first ordered her to take two Ounces of an Infusion of Millipedes Morning and Evening, and a Dose of the following Physic every other Day: *R. Pulv. rad. jalap. gr. xv. nitri gr. viii. cum rad. scill. recent. gr. x. vel gr. xv. pro re nata*; while she took for her common Drink a Solution of half an Ounce of the Broom-Ashes in a Quart of Water. On beginning this Course she made Water freely, the Physic both vomited and purged her, and the Swellings decreased daily. After taking five Doses of the Physic, she had the following Electuary and Julep:
R.

less drained off by some artificial Opening made in the most depending Part.

a. When

R. Conserv. absynth. maritim. fescunciam specier. aromatic. chalyb. cum sulphur. præparat. singulorum drachmam unam syrup e cortice aurantiorum q. s. cap. molem n. m. bis die superbibendo uncias duas julep. sequentis. R Aq. fontan. aq. cinam. simp. singulorum uncias ii. tinct. styptic Helvet. uncias iv. By using these Medicines, and taking occasionally a Dose of her Physic, she got well.

* * The same Gentleman, in the Year 1754, attended an Officer of Distinction who was ill of an Anasarca, and who took Variety of Medicines without receiving much Benefit, till the Doctor ordered his Legs to be punctured, and him to have the following Draughts twice a-Day: *R. Aq. cort. aurant. simp. fescunciam aq. juniper. composit. drachm. iii. confect. cardiac. drachmam dimidiam, sal. succin. gr. x. syrup. croci scrupulos ii. misce pro haustu.* The Punctures discharged a great deal of Water, and the Draughts proved powerfully diuretic, and removed all his dropfical Complaints. He enjoyed a pretty good State of Health for near eighteen Months after this, only he had once a violent Hæmorrhage at the Nose, which was stopt by the Use of Astringents; and at another Time a Pain in his Foot, which was judged to be gouty, but which he of himself repelled by the Application of Poultices. He died suddenly on the 31st of March 1757.—On opening his Body, there was more than the common Quantity of Blood in the Vessels. The Lungs were sound, and there was no Water

a. When the Cuticle is raised by a Veficatory, large Quantities of Water are sometimes

ter in the Cavity of the Thorax. The Heart was in its natural Situation. The Pericardium had a good deal of Fat about it, and contained about the usual Quantity of Serum. The Heart was of a large Size, its Apex was grown to the Pericardium, and at that Part its Substance had lost its muscular Texture, and had become thin and compact, almost like a Membrane. In the right Auricle and Ventricle there was some coagulated Blood, but no Polypus; though in the left Ventricle, contrary to what usually occurs, there was a firm Polypus, but small, not exceeding the Size of a Coat-Button, placed just in the inner Side of the Apex, which seemed to have been formed by the Blood, which constantly stagnated in that Part of the Cavity which could not be contracted from the Fault of the Structure just now mentioned. The Valves of the Heart were in good Order; the right Ventricle seemed to be entire; but besides the Concretion of the Apex, and the Thinness of that Part, some part of the Sides of the left Ventricle near the Apex, and part of the Septum, were of a whitish Colour, and of a callous Hardness.—The Liver was found, but adhered to the Diaphragm, and the Gall Bladder was of double the natural Size, and contained a viscid Bile and three Calculi, one of which was large. The other Viscera were in a natural State,

poured

poured out thro' the Skin (*p*); but if its Surface is too much exposed it is liable to gangrene;

(*p*) I have frequently ordered Blisters to be applied to the Legs, or Punctures to be made, in Cases where anasarca Swellings had come after Fevers, Fluxes, and Agues, and generally with good Effect, where the Strength was not already too much exhausted, nor the Dropsy complicated with other Disorders; but when Patients are very weak, or have a hectic Fever or Purging, then often the Discharge exhausts the Strength, and a Gangrene and Death are the Consequences. The Punctures are greatly preferable to Blisters, not being near so liable to be attended with troublesome Inflammations.

We find the Case of a Patient cured by Vesicatories, applied to many different Parts of the Body, in *River. Obs. commun. a Jacoz. obs. 21.*—In the Year 1747 I saw a young Man labouring under an Anasarca, from whom all the Water was drained off by Blisters applied to his Legs, but his Legs mortifying he died.—See such another Case told by *Gul. Fabric. Hildan. cent. 1. obs. 49.*

* * In January 1763, a Physician was called to a young Man, aged thirty-one, who, on catching Cold after being cured of a Venereal Complaint, had fallen into an universal Dropsy, attended with a Paucity of Urine, and its other Symptoms. He was so low that the Doctor was afraid to give him strong purgative Medicines, and therefore at first attempted the Cure by Diuretics. He had the *Balsam Co-*

grene; so that other Expedients ought to be preferred to this Method.

The

paiui with *Lixivium Tartari*; then the *Oleum Juniperi* by Drops, Draughts with *Sal Succini* and *Confectio Cardiaca* successively one after another, but without finding Relief: Being reduced low, and the Swelling increased much, the Doctor ordered small Punctures to be made first in one Leg, and then in the other, at the same time that he prescribed him the following Draughts. *R. Aq. Alexet. simp. fescunciam aq. nucis moschat. drachmas ii. sal succin. gr. x. sal. vol. c. cervi gr. vi. vel. q. f. ad saturationem, syrup. balsami tolut. drachm. i. M. fiat haustus sumendus ter die.* The Punctures discharged a great deal of Water, and the Swelling lessened.—In a few Days he had the Draughts only twice a Day, Morning and Evening, and as he rested badly at Nights, twenty or twenty-five Drops of Laudanum were added to the Evening Draught; and at the same time he began to rub his Belly Morning and Evening for near an Hour and a half with Sallad Oil. This Course he continued for a Fortnight; he was sensibly easier after each Unction, he began to make Water freely, and the Quantity he made soon exceeded that of the Liquor he drank. By the Middle of *April*, both his Belly and his Legs were reduced to their natural Size, he walked out, was seemingly in good Health on the 26th, and continued well some Months after, the last Time his Physician saw him. It is remarkable that the first very great Flow

β. The Antients burnt the Skin with a hot Iron, and some Moderns use the potential Cautey in Place of it. But Eschars formed

Flow of Urine came after eating for Supper a Couple of Eggs with the Shells, which his Nurse had recommended to him as good for his Stomach.

* * * Another Patient of the same Gentleman's who had been subject to the Gravel, after catching Cold, perceived that his Belly and Legs had swelled, and that he did not make a Quarter of a Pint of Urine in the twenty-four Hours. The Doctor at first ordered him fifteen Drops of the Oil of Juniper mixed in a Draught by Means of the Yolk of an Egg twice a Day, and a mercurial Pill, which lessened the Swelling of his Belly, but not of his Legs. After four Days the Pills made him sick, and he was desired to leave them off, to rub his Belly Morning and Evening with Sallad Oil, and to use for Drink an Infusion of the Cineres Genistæ; these Remedies proved extremely diuretic, removed all the Swellings, but the great Discharge by Urine weakened him too much, and therefore he was obliged to leave off their further Use; the Doctor saw him some Time after, when he was much emaciated, but had had no Return of his dropfical Complaints.

by either Method will not allow the Water to pass off immediately ; so that we must wait for the slow Separation of the Eschar, while in the mean Time the Disease is gaining Ground, or the Eschar must be cut thro' or removed, and therefore the previous Burning was useless.

2. In *Galen's* Time Punctures were more used by Physicians than burning (*q*), the former in general allowing the Water to run out more plentifully (*r*).

(*q*) See *Galen. Comment. in Aphor. 27. sect. vi.*

(*r*) A Man Seventy Years of Age, who laboured under an Anasarca, by the Assistance of the Puncture with the Needle lived several Months, *Willis de Anasarca, pharm. ration. part. 2.* One of the Servants of the Portuguese Envoy to the British Court would have died in a short Time of a Dropsy, had not the Waters plentifully and constantly ouzed out at an Orifice casually made just by his great Toe, where he had formerly a deep-rooted Corn. *English Translat. of Boerhaave's Aphorisms, note to sect. 1242.*

Most

Most of the Moderns follow *Celsus's* Method (s), and make Incisions into the Hydropic Swellings to give Vent to the Water (t).

The

(s) “ Incidendum quoque super talum, quatuor fere digitis, ex parte interiore est: quo per aliquot dies frequens humor feratur; atque ipsos tumores incidere altis plagis oportet; concutiendumque corpus est multa gestatione, atque ubi inductæ vulneribus cicatrices sunt, adjiciendum exercitationibus & cibus, donec corpus ad pristinum statum revertatur.” *Cels. lib. iii. cap. 21.*

(t) A middle aged Man labouring under an Anasarca from Hard-drinking, had Incisions made on the Inside of his Thigh, which discharged a vast Quantity of Water, and took three Doses of a strong hydragogue Purge, of the Juice of the common Iris, at the Distance of three Days between each, while only a Pint of Liquor was allowed him in a Day; by which Method most of the hydropic Swellings subsided. He then was ordered, by Way of a Strengtheners, some Wormwood Water in which a little Rhubarb had been infused. The Incisions were kept open, and the Patient abstaining from drinking for some

I 3

Months,

2. The *Egyptians* are said (*u*) to have made Setons in the Skin, for the Water to drain away

Months, was quite cured. *Lifter. Exercit. Med. de hydrope, ægrot. 1.*—In the Month of April 1754, *Elizabeth Davies* was taken into *St. George's Hospital*, by *Dr. Dawson*, for an universal Dropsy; she told me she had been formerly hydropic, and was cured by purging. The Doctor at first ordered her some Doses of Jalap and Nitre, two or three Times a Week, and in the intermediate Days to take the Squill Pills; which Medicines had little Effect. In the Beginning of *May* her Legs were scarified, and she was ordered dry Diet, and the bitter scorbutic Ale, and to continue the Use of the Squill Pills. In a little Time most of the extravasated Water was evacuated by the Scarifications. By continuing this Regimen, and taking now and then a Purge, and once a Vomit, all her dropfical Swellings were gone by the Month of *July*, when she was ordered the Steel Electuary and cold Bath. Being to all Appearance cured of her Dropsy, she was going to be dismissed the Hospital, when she was suddenly seized with a Fever, and died the third Day. Upon opening her Body no visible Cause could be found to which either her Dropsy or Fever could be attributed.—A Lady labouring under both an Anasarca and Ascites had a small Incision made in each Leg, through which about a Gallon of Water was discharged every Day for ten Days together; her
Legs

away through the Apertures, by which the Cord passes. Others put Pease or some such Bodies in the Incisions to keep them open ; but a Gangrene is to be feared

Legs were fomented often with warm Fomentations ; she drank twice a Day a Cupful of a bitter Infusion, and at Night a diuretic Draught made with Oxymel of Squills, Cinnamon Water, and Spirit of Lavender, and as her Strength returned she took some purgative Medicines. By this Treatment she was restored to Health, and lived five Years afterwards without a Relapse. *Mead. Mon. Med. cap. viii.*—Mr. *Cowper* is said to have cured a great many by making an Incision between the Toes. *English Translat. of Boerhaav. aphor. note to sect. 1242.*

(u) “ *Veteres Ægyptii homines hydropicos pharmacis quidem non vexabant ; introducebant autem per cutem acus fila trahentes, relinquebant in vulnere fila, ne coalesceret, ita aqua continuo fluxu, diu noctuque effluebat omnis.*” *Boerhaav. comment. in instit. med. sect. 416, edit. ab Haller.*—Where Boerhaave met with this Account of the *Egyptians* I cannot find ; but one may see this Operation described, and Cases of the *Ascites* where it was unsuccessfully put in Practice, related by *Decker, Exercit. practic. p. 289.*

from the continual Pressure and Irritation of these extraneous Bodies.

75. Some Cautions ought to be observed in making these Incisions.

a. They ought always to be in the lower and most depending swelled Part, that the Water may have a free Exit.

b. Large Vessels, Nerves, Tendons, and such other Organs, are not to be hurt, if it can be avoided, in performing any of these Operations,

c. The Discharge of the Water must be regulated according to the Strength of the Patient, lest in attempting to cure we destroy him (*x*) ;

(*x*) “Ægrum igitur quovis modo sustinere oportet, ne
“ curatio mortem acceleret ; id quod mihi videre contigit,
“ semel quidem mea ipsius non satis caute ægroti robur æ-
“ stimantis atque iterum chirurgi temerarii culpa.” *Mead.*
Mon. Med. cap. viii.

and

and therefore he is by all Means to be supported, and if the Evacuation be too large, it must be moderated by proper Plaisters and Bandages.

d. Hippocrates long ago observed, that the Sores of hydropic People were not easily cured (*y*); and therefore advises that they should be anointed with a warm Medicine (*z*); and lest the Skin near to such Sores, being perpetually wet with the warm sharp Humours flowing from them, inflame, become painful, and in Danger of producing a Gangrene, it ought to be protected by some defensive Ointment (*a*).

(*y*) See *Hippoc. Aphor. sect. vi. 8.*

(*z*) See *Hippoc. de locis in homine, sect. 36.*

(*a*) R. Unguent. alb. unc. i. liquefat leni calore, & ab igne remoto, adde balsam. oppodeltoch. drach. i. misce.—vel R. Ung. e lapide calaminari fescunc. balsam. peruvian. drach. iii. camphor. in spirit. vini solut. drach. ii. misce s. a. exsiccatae cuti applicetur linimentum super linteum extensum, vel manu cuti affricetur.

e If

e. If the Sores of a dropfical Patient Gangrene, they must be treated with Medicines proper for this last named Disease (*b*).

EXTERNAL HYDROCEPHALUS.

76. The external Hydrocephalus has nothing further peculiar to it, than that the Water cannot easily descend from the Integuments of the Cranium to the inferior Parts, by Reason of their close Connection to the Ears, Muscles, and their Aponeurosis (*c*).

77. In the Cure great Benefit arises from Pressure by Bandages, which could be of little or no Service in the external Hydrocele; the Medicines are in other Respects the

(*b*) See the good Effects of the Peruvian Bark in such a Case. *Med. Essays*, vol. iv. art. 10. obs. 2.

(*c*) *Hieron. Fabric. ab Aquapend.* says he has seen the Skin of the Head not only separated by Water from the Pericranium, but also raised by it into a large Tumour. *Operat. chirurg. de hydrocephal.*

same

same as were prescribed for the universal Anasarca (*d*).

Of the DIFFUSED DROPSY of the SPERMATIC CHORD.

78. A diffused watery Swelling of the Spermatic Chord, which feels like a deep seated oblong Tumour along the Course of the Chord, has nothing peculiar either in its Symptoms or Cure, except it becomes so large as to require the Water to be let out either by

(*d*) See in *Burnet's Medicinæ thesaurus*, from *Amatus Lusitanus*, a Case of a Boy who was cured of a Hydrocephalus by anointing the Parts with an Ointment made of Camomile, Wormwood, and Butter. *Lib. viii. sect. 11.*—One *Abraham Clef*, by riding in cold Weather, had his Head distended with a watery Swelling to a monstrous Size. He was cured by Frictions, warm Fomentations, and a Bolus, which both purged and vomited him. *Binninger obs. cent. 1 obs. 94.*—An old Man was cured of a Hydrocephalus by an Issue made with the actual Cautey. *Piso. obs. part. 1. sect. 2.*

Puncture

Puncture or Incision; in which Case the Operation must be done with Care, lest the Spermatic Vessels be hurt.

Of the SCROTAL ANASARCA.

79. The external Hydrocele or Scrotal Anasarca, which is often accompanied with a very large watery Swelling of the subcutaneous cellular Membranes of the Penis, increases sometimes to a monstrous Size, on account of the great Quantity of loose cellular Membranes in the Scrotum; but this Disease has little else than the Name peculiar to it (*e*),
except

(*e*) A Gentleman by a Fall bruised one of his Testicles, which remained larger than the other without giving him any Trouble for about twenty Years, when he found his Scrotum begin to swell; it continued to increase till it was as large as a Child's Head, and so firm that it was difficult to know what its Contents were. It withstood both external and internal Medicines, till a Puncture was made into it with a Lancet, and a small Quantity of Water was discharged; we could then easily feel a Fluctuation
of

except that when an Attempt is made to cure it by Incisions, they ought to be made on each Side of the Raphe, otherwise the Water will not be evacuated from the lower Part of the Scrotum, on the Side where there are no Incisions ; because, though there is always a free Communication among the cellular Membranes of the Scrotum some way below the Penis, yet in several Bodies there is not such a Communication at its lower Part (*f*).

of Liquor ; and though but a small Quantity of the Water was let out, by applying to the Scrotum a Powder of Chalk and Wormwood, and giving a few purgative Medicines, the rest of the Swelling was discussed, and a Cure completed.—A Soldier in the Campaign 1745, came to Dr. Grainger with a scrotal Anasarca, which was occasioned by a Blow on the Scrotum the Day before. He was immediately blooded, and a Discussion of the Tumour attempted with Fomentations, by which the Inflammation was removed, but the Swelling still remained. The Doctor ordered a Blister to be applied to the whole Scrotum, which discharging plentifully, in a few Days happily effected a Cure. *Douglas's Treatise on Hydrocele, chap. i. p. 18. sect. 20.*

(*f*) See the Description of the Structure of the Scrotum in *Medical Essays, vol. v. art. 20. sect. 30.*

If

If this Disease is the Consequence of an Ascites, an Anasarca, or other Disorder, its radical Cure must be the Removal of these its Causes; soon after which it commonly goes off of itself, or with very little Assistance, which is no other than has been prescribed for the general Anasarca.

80. There is indeed a bastard Kind of it, that, to wit, which is caused by Urine escaping through the Substance of the Urethra, and diffusing itself among the cellular Membranes of the Scrotum, where it soon turns acrid, and irritates or erodes the Cells containing it (g).

a. In this Case numerous Incisions are to be made into the Scrotum, for giving a free Passage to the Urine, which might otherwise create wide extended sinous Ulcers and Fistulæ.

(g). See Examples of this in *Miscel. Cur. a. n. c. dec.* 3. an. 3. obs. 68. and in *Medical Essays*, vol. v. art. 22.

What-

β. Whatever Obstacle there is to the Passage of the Urine through the Urethra, it ought to be removed.

γ. The Urine is always to be let out of the Bladder through a Catheter introduced into it, till the preternatural Opening in the Urethra is closed up.

δ. If these two last Methods cannot be executed, an Incision ought to be made in the Urethra, between the Part which is blocked up and the Bladder, that the Urine may flow out of the Wound, and not be dispersed thro' the cellular Substance of the Scrotum and neighbouring Parts.

External WATERY SWELLING of the Knee.

81. An external watery Swelling sometimes appears at the Knee on the Foreside of the Rotula, especially of Chamber Maids and others

others who work upon their Knees. It feels mostly like a diffused, though sometimes like an incysted watery Swelling (*b*).

82. The Cure is to be attempted by,—The Fumes of aromatic Gums, or other Aromatics received on the Knee;—the embrocating the Part with discutient Liniments;—the Application of discutient and astringent Fomentations and Poultices;—and Doses of some brisk purgative Medicine.

83. If the Swelling be large and does not yield to the above Treatment, it must be punctured to let out the Fluid, and afterwards a gentle Pressure kept on the Part, by Means of Bandages, while the Remedies just now mentioned are used.

(*b*) This Sort of Swelling of the Knee is not generally taken Notice of by Authors, though I have seen three or four such Cases, which were cured by the Remedies here recommended. I never saw any of them opened, but I have been told by Surgeons of Experience that they have known troublesome Symptoms follow the making a large Incision into such Tumours.

84. IN-

INTERNAL DIFFUSED DROPSIES.

84. Water diffused through the cellular Membranes of the internal Organs, the Mediastinum, the Mesentery, the Stomach and Intestines, and the other Parts, is not to be distinguished till the Dropsy becomes more universal, and shews itself either in form of a Hydrops Thoracis, an Ascites, or an universal Anasarca.

85. Is it not reasonable to believe that many Dropsies of the Breast and Abdomen have taken their Rise from Extravasations of watery Fluids into the cellular Membranes of the internal Organs, compressing and otherwise disturbing the Functions of their absorbent Vessels, especially in those Dropsies which yielded to Punctures made into the cellular Membranes of the Legs, and to other external Drains (*b*)?

86. Such internal diffused Dropsies when known require to be treated in the same Manner as the universal Anasarca.

DROPSY of the LUNGS.

87. When the Lungs are distended with Air, their whole cellular Substance seems to have plain Openings into the Bronchi or Branches of the Trachea, and therefore one should

(b) *Mead* relates an Example of an Ascites cured by an external Drain; but as the Patient used Diuretics and Purgatives, the Cure could not be attributed solely to the Drain. *Monit. Med. cap. 8.*—The Water in the Belly of an ascitical Person is said to have all run off through the Pores of the Skin and Cuticle of the Hypochondria. *Miscel. cur. a. n. c. dec. 2. an. 1. obs. 79.*—A Man who had both an Anasarca and Ascites was freed of the Anasarca by making an Incision into the Scrotum, but the Ascites did not diminish. *Misc. cur. a. n. c. dec. 2. ann. 10. obs. 34.*—It is a general Remark that Scarifications and Issues do no Good in the Ascites, unless it be complicated with anasarcaous Swellings.

imagine

imagine that all the Fluid which once entered these Cells would be readily thrown up by coughing; but in the Kind of Asthma commonly called Humoral, the Passages from the Cells into the Bronchi seem to be somehow or other shut up; for the Patients have for a considerable Time a laborious suffocating breathing, without bringing up any Thing, and then cough up large Quantities of slimy Water: may not this therefore be esteemed a Species of the diffused Dropsy? But however this be, it is certain that the humoral Asthma is often the Occasion of the Anasarca (*k*), and is cured by the Remedies that

(*k*) Dr. *Simson*, in his Remarks on the Hydrops Pectoris, &c. says, “ I have found a small Degree of an Anasarca
 “ attended with a much greater Breathlessness than the
 “ greatest Swellings of the Ascites, so that when I find a
 “ sudden asthmatic Fit attack a Person without any other
 “ visible Cause, if I find the least Fullness of the Face or
 “ Ancles, I make no Doubt to fix upon this as the Cause,
 “ and I form my Indication of Cure accordingly, especially if I find along with it a Pulse suppressed so as scarce

that remove this Disorder, of which some Account has already been given.

“to be felt.” See *Edinburgh Medical Essays*, Art. 59. vol. vi.

I have seen some such Cases; and there is a remarkable one inserted in the *Medical Essays*, vol. iii. art. 25. of a Gentleman rendered anasarctous by an Infarction of the Lungs, whose Pulse was no where to be felt till after the Operation of some Purgatives, which proved his Cure in three several Attacks; after which he lived many Years in good Health.

This Œdema of the Lungs is taken Notice of by *Albertini* in the *Institut. Acad. Bonon.* tom. i. p. 382.—By *Van Sweiten*, *Comment. sect.* 1220. vol. iv. pag. 143. and by other Authors.



PART II.

CHAP. II.

Of the INCYSTED DROPSY.

88. **T**HE Cysts or Bags which contain the Water of Dropsies, are either such Cavities as existed naturally in the Human Body, or such as are mostly formed by the Disease. The former may be called *natural Cavities*, the other *preternatural Cysts*.

Of natural HYDROPIC CAVITIES.

89. The *Natural hydropic Cavities*, either contain nothing but Water, or contain with it other Organs.

90. There are only two Examples of *Natural Cavities* containing nothing but Water, to which Authors have bestowed the Name of Dropsies, viz. the *Uterus*, and *Fallopian Tubes*.—The Distension indeed of the Urinary and Gall Bladders, by their proper Liquors, resembles it greatly; but as the contained Liquors are very different from Serum or Lymph, the Disease ought not to be ranked with the Dropsy.

91. The Cavities which contain other Organs along with the Water, are many.—The *Eye*, containing its Humours,—the *Skull*, the *Brain* and its Coverings—the *Vertebræ of the Spine*, the *spinal Marrow* and Nerves—the *Capsular Ligaments of the Joints*, within which are the Mucaginous Glands, &c.—the *Thorax*, in which the Lungs and other Organs are situated—the *Pericardium*, serving as a Case to the Heart, and large Vessels near it,—the *Abdomen*, containing the Chylopoetic and other Viscera,—the *Tunica Vaginalis*, the Testicle.

93. Though

92. Though Anatomists demonstrate, that many of the Organs, said to be contained in these Cavities, are placed on the Outside of the Membranes that compose them; yet I may here be allowed to use the common Way of speaking in Respect to these Subjects, and may therefore consider these Organs as if they were contained within the several Cavities.

93. These natural Cavities are not immediately, upon the Beginning of a Collection of Water, so much stretched by it, as those Cysts are which owe, in a Manner, their Existence to the Disease; for which Reason the Fluctuation of the contained Liquor is more perceptible, when the Part is moved or alternately pressed by the Fingers than it is in the preternatural Cysts. —The Tension and Weight of the Liquor which falls always to the lower Part, are more sensibly felt where it has Room to move from one Part of the Sac to the other, than where it remains always in the same Place; and as it is tossed hither and thither it sooner be-

comes acrid, and erodes the Parts it is contiguous to; and if it is absorbed and mixed with the Blood, it produces Fever, Thirst and other bad Symptoms. The less stretching and Pressure there is on the Cyst, the stronger Power of Absorption do its Vessels possess, according to the general Remark in sect. 36.

DROPSY of the UTERUS.

94. The Dropsy of the Uterus is occasioned by such Causes as obstruct the Passage from it, and the Absorption of the thin watery Liquors which naturally distil into its Cavity (1) ; or Hydatides may be formed in it, either

(1) In July 1754, I was desired by Dr. J. Durban, Physician at *Halesworth* in *Suffolk*, who then lived at *Richmond* in *Surry*, to see Mrs. *Knowels*, a poor Woman who was ill of the Dropsy. She was fifty-two Years of Age, and had had a Child in the Year 1726. In 1744 her Belly began to swell, and she imagined that she was again with Child,

ther in its own cellular Substance, or in Remains of Placentæ (*m*). The Progress of this

Child, till nine Months were elapsed; when perceiving her Mistake, she consulted a Physician, who believing the Swelling to be occasioned by a fleshy Substance in the Uterus, ordered her to take a Dose of Hiera Picra once a Month. After some Years the Swelling decreased greatly, when a small hard Lump could be perceived in the right Epigastric Region, which she said seemed to fall over to the left Side like a Ball, when she turned from the right to the left Side in Bed.

In Spring 1753, she had a paralytic Stroke, which affected principally the Muscles of her Face.—In Autumn her Menses stopt—and towards the End of the Year she perceived her Belly begin to enlarge again; and after taking a Dose of Hiera Picra, she was attacked with a violent Pain of her Bowels, and a Purging. Soon after this her Belly swelled as much as if she had been six Months gone with Child; and although the Use of Diuretic, mild laxative and opiate Medicines lessened the Swellings a little and procured her temporal Relief, yet she daily lost Strength, and complained often of Sickness, and sharp Pains in the Bowels till the Time of her Death, which happened the 23d of September 1754.

When I saw her in July, Dr. Durban told me that he had some Days before introduced his Finger into the Vagina;

this Disease is sometimes like to that of Pregnancy, and in young Women has at first been
mistaken

gina ; that the Cervix Uteri seemed by the Feel to be almost obliterated, and the Os Internum to be entirely shut up : and that when he had pressed the Point of his Finger up against the Os Tincæ, he had felt a large hard Body rise upon it ; and that the Woman had had a Discharge of a purulent Matter from the Vagina for some Time past.— In *September* the Doctor acquainted me of her Death, and I went out to *Richmond* next Day, and was present at the Opening of the Body.

The Omentum was eroded, and adhered to the Fundus Uteri and left Fallopian Tube.— The Folds of the Intestines adhered to one another in several Places.— The Uterus was as large as if it contained a Foetus of six Months ; it felt very hard ; its Substance cut like a Piece of Pasteboard, it was thin, in several Places was ossified, and in others filled with a cretaceous Matter ; it contained near three Pints of a black fetid Water, and its internal Surface was black, rough and eroded.— The Os Tincæ was swelled, knobby and scirrhus, and upon being pressed discharged a fetid purulent Sanies, such as the Patient had evacuated by the Vagina when in Life.— The right Fallopian Tube and Ovary were greatly enlarged, their Substance being filled with a steatomatous and schirrous Matter, and they were
beset

mistaken for it, and the Truth not certainly known till nine Months were elapsed, the Mo-

befet with several watery Vesicles.— The left Fallopian Tube and Ovary seemed rather to be wasted.

Hoffman mentions a Lady who daily voided a Pint of Liquor from the Uterus, which reduced her to the lowest Extremity, and at last put an End to her Life. The Uterus after her Death was found to be in part scirrhous, and its Vessels full of polypous Concretions. *Medic. ration. system. Tom. iii. p. 160.*

A Woman for some time voided every Month from the Uterus as much Citron coloured Water as filled six or eight Basons, after which her Menses flowed regularly. *Fernel. in patholog. lib. iv. cap. xv.*—*Vesalius* tells us he found 138 lib. of Water in the Uterus of a Woman; its Os Internum was wonderfully hardened, and the right Ovarium was composed of nine or ten Bags as large as Goose or Ostrich Eggs. *Anat. lib. v. cap. 9.*

A lady imagining herself eight Months gone with Child, voided a great Quantity of Water, and was cured. *Accouch-mens de la Motte, obs. 16.*—A Woman died of a Dropsy; when her Body was opened, her Uterus was found full of Water, and so large that a Boy of ten Years of Age could easily have been contained in it. The Orifice was quite shut up by a round glandular Tumor, which seemed divided by Zones almost like an Orange. *Bonet. sepulch. anat. lib. iii. sect. 21. obs. 55.*

tion

tion of the Air in the Intestines often resembling the Stirrings of a Child.

95. Wo-

(*m*) Two Bags full of Water were taken out of a Woman's Uterus, the Orifice of which had degenerated into an impervious solid Ligament, and on its Sides were a Number of fleshy Knobs. *Miscel. cur. a. n. e. dec. 2. ann. 5. obs. 50 & 67.*— A Woman voided a great Number of Hydatides from her Womb. *Philosoph. transf. num. 460. sect. 11.*— A Woman who believed herself six Months gone with Child, voided a sort of Mole that weighed 2 lb. composed of many hundreds of small Hydatides, which were fastened together by an infinite Number of small Filaments, and had for a Base a sort of confused fleshy Substance; after which she recovered in a short Time, and soon became pregnant. *Fran. Mauriceau. obs. sur la grosseſſe, obs. 377.*— A Woman about twenty-seven Years of Age, who imagined herself seven Months gone with Child, was seized with a Flooding, and called Dr. *Crawford*, who upon introducing his Hand into the Vagina felt something which he took for clotted Blood, and brought it away. Upon examining it, he found it to be a large Bundle of Hydatides, connected one with another by an infinite Number of small Filaments. The Bladders contained a clear Lymph, and were of different Sizes, some as large as one's Thumb, and others as small as a Pin's Head. The Woman's Pains continuing, she evacuated as many more Hydatides as filled a Quart.

95. Women with Child are likewise subject to a Kind of Hydrops Uteri; for as the Os Uteri is shut in the Time of Pregnancy, if there be too great a Secretion of Liquors into the Cavity of the Uterus, these Liquors are collected, and form a Kind of Hydrops Uteri.

96. These Waters are sometimes evacuated in the Time of Pregnancy without causing Abortion (*n*); at other times they are not discharged

Quart-bason, after which she recovered gradually.— See in *Ruyfch. Thes. x. num. 63, 64 & 65.* the Account of Placentæ composed of Hydatides; and of one whose Half was only degenerated into Hydatides. *Ib. obs. 33.*—Histories of Bundles of Hydatides evacuated, which had Membranes attached to them like to those of the Secundines. *Stalpart vander Wiel. obs. cent. 1. obs. 70.*

(*n*) *Mauriceau* says that Pregnancy is often complicated with a Kind of Dropsy of the Uterus; and gives several Instances of Women who voided 1, 2, 3, 4, or more Pints of Water at different Stages of their Pregnancy, without miscarrying, and having afterwards carried their Children to the ordinary Time, discharged in Labour the usual Quantity of Waters. The first Water voided, he imagines to have

charged till the natural Time of Labour approaches (o).

97. Where there is no Suspicion of Pregnancy, the Finger or Catheter introduced into the Os Uteri without much Violence or lacerating the Parts, puts an End to the Disease very speedily by letting out the Water. But if a Passage for it cannot be made in this Way, the constricted Parts are to be relaxed by warm Baths and Fomentations (p).— Vomits may be

have been a Kind of Hydrops Uteri; see his *Traité des maladies des femmes grosses*, lib. 1. chap. 21. and his Observations 7, 19, 60, 113, 186, 219, 361, 611, 688.

(o) *Hildanus* says that his Wife, being pregnant in the Year 1604, swelled to a monstrous Size; that, being taken with the Labour Pains, she voided eighteen Pints of clear Water; in about half an Hour after the Membranes broke, and the usual Waters came away, and she was immediately delivered of a strong Male Child. *Observ. chirurg. cent. 2. obs. 56.*

(p) We already mentioned the Case of the Countess of *Keglewich*, who was cured of a Dropsy of the Uterus by warm Baths. *Miscel. curios. dec. 3. ann. 5 & 6. obs. 162.*

given

given to try if the obstructed Orifice can be forced open by the Shock which the Uterus sustains during their Operation (*q*); and they will probably have more Effect if the Patient vomit in a warm Bath. If these Methods prove ineffectual, and the Patient's Life appears to be in Danger from the Quantity or Acrimony of the Water, and a Fluctuation is plainly to be felt at the under Part of the Womb, a Trocar may be pushed into its Cavity; the Water being evacuated through the Cannula thereof, a new Attempt of introducing a Finger or Catheter into the Os Uteri is to be made; if it succeed, a Sponge-tent, with a pretty long Thread tied to it, must be put in, to keep the Orifice open, and to permit the Water to drain away.

(*q*) A Woman cured of a Dropsy of the Uterus by bruising her Belly in a Fall. *Miscel. cur. a. n. c. dec. 3. ann. 5 & 6. obs. 57.*—A Lady cured of the Dropsy of the Uterus or Fallopian Tube by a Cough, for which some aperient Medicines had been given. *Zodaic. Med. Gall. ann. 2. Feb. obs. 12.*

After

98. After evacuating the Water, the Obstruction is to be removed by a suitable Diet, by attenuating resolvent Medicines (*r*), and by strengthening, or drying (*s*) or relaxing (*t*) topical Applications, as the Case requires.

99. If the Obstruction depends upon a Tumor that will not resolve, it ought, if possible, to be taken away by manual Operation.

(*r*) R. Sapon. venet. gum ammoniac. singul. drach. i. rad. Scillæ exsiccat. scrupul. i. syrup ex allio q. s. ut fiant pil. xxx. cap. v. bis die.—R. Pil. gummos. scrup. i. sal. mart. gr. ii. misce & divid. in pil. v. repetatur dosis mane & vesperi.—R. Argent. vivi, scrup. i. extingue in Bals. copai. & adde Amyli q. s. ut fiant Pil. x. cap. unam mane et vesperi.

(*s*) R. Aq. calc. simpl lib. ii. gelat. amyl. unc. ii. m. injiciat. lib. ss. in uterum ter die.—vel R. Balsam. Peruv. drach. ii. vitell. ovi unius, misce optime & adde lact. vaccini. recent. lib. i. ad eundem usum.—vel R. Vitriol. alb. gr. viii. solv. in aq. fontan. unc. viii. & adde mell. rosar. unc. ii. injiciantur in uterum.

(*t*) R. Decoct. commun. pro clyster. unc. x. tepide in uterum injiciendas ter vel quater die.—vel R. Ol. olivar. unc. viii. tepide injiciendas sæpius.

DROPSY of the FALLOPIAN TUBES.

10. Water is sometimes collected in the Fallopi-
an Tubes (*u*) by the same Causes as in the
Uterus. In small Quantities it occasions little
Inconvenience; but when the Collection grows

(*u*) One *Catherine Bonevalia* being in a bad State of
Health from a Suppression of the Menfes, her Belly began
to swell, and increased so much as to make her Life quite
miserable for nine Years that she lived. When she died,
her Body was opened. The Omentum was found quite
putrid, the Liver pale, the Spleen small, no Water in the
Cavity of the Abdomen, but about 9 lib. of Water and Pus,
mixed with Hydatides, in each of the Tubes of the Womb;
there was some Hydatides below the outer Coat of the Ute-
rus, but no Liquor in its Cavity. *Tulp. Obs. Lib. iv. Obs.*
45.—The right Fallopi- an Tube contained twelve Pounds
of Water. *Zodiac. med. gall. An. 1. Epist. vi. Obs. 9.* The
left Tube contained thirty one Pounds of a watery and
gelatinous Liquor; the Substance of the Tube was so thick-
ened and enlarged as to weigh lib. 7. *De Haen Rad. med.*
par. v. cap. viii. sect. 1.—*Bonetus* relates a Case where the
upper Part of the right Tube contained a hundred and
twelve Pounds of Water; the left Tube was scirrhus, and
weighed lib. 10. See *Sepulch. anatom. Tom. ii. Lib. iii. Sect.*
21. Obs. 39.

L

large,

large, it brings on a Number of bad Symptoms, by its Pressure on the neighbouring Organs. Before this happens it feels like a deep-seated Tumor, the Nature of which cannot well be determined; but when it becomes so large, as to distend the Abdomen, a Fluctuation of Liquors is felt in a full-distended deep-seated Sac. It is almost impossible to determine the precise Seat of the Disease till after Death; for the Ovarium being very subject to such Swellings, it may be mistaken for a Tumefaction of some of its Vesicles. These two Sorts of Dropsies are sometimes complicated together, as we know by Cases related by Authors (w).

(w) In the *French Translation of this Essay* there are two Cases of this Kind quoted from Dr. Haller's *Collect. Disput. Patholog. tom. iv. p. 249, 250.*—In the one both the Tube and Ovarium were dropfical; in the other the Uterus was also affected, and they made one confused Mass of an enormous Size composed of Cells filled with a serous and mucelaginous Matter.

The

The Cure may be expected chiefly from the Methods to be proposed afterwards for the Cure of Hydatides. Could we determine the Seat of the Disease, we might attempt to open the Orifice of the Tube into the Womb by warm Baths and Emetics, as was proposed in treating of the Dropsy of the Uterus : for in case the Obstruction depended upon Stricture or viscid Matter in the Tube, we might be so lucky as to succeed.

The true HYDROPTHALMIA.

101. In the true Hydrophthalmia the Ball of the Eye increases gradually, and the Sight decays ; at length, when the Swelling becomes large, the Patient grows blind, and Part of the Ball stands prominent without its Orbit ; sometimes a smart Pain is felt in it, and the Transparency of the Eye is lost.

102. Sometimes only the Cornea, and at other Times only Part of it protrudes ; and

nearly the same Consequences follow as when the whole Ball of the Eye is affected.

103. This Disease rarely proves mortal, but frequently deprives the Patient of the Sight of the Eye affected.

104. At its Beginning it sometimes may be cured by astringent strengthening Applications (x). Purgatives are frequently to be given; and moderate Bleeding, repeated as Occasion requires, is often necessary.

105. When the Eye is large, and Medicines do not diminish it, a small Incision must be made

(x) R. Acet. q. s. ut madescat linteum, cui aspergatur pauxillum spir. vin. camphorati, et oculo applicetur.—R. Flor. camamel. rosar. rub. ana unc. ii. coque ex vin. Gallic. rub. q. s. ut fiat epithema.—R. Tutiae præparat. drach. i. vitriol. alb. gr. iv. sacchar. saturn. g. ii. misce, terantur. in pulv. subtil. et cum aq. rosar. fescunc. fiat collyrium oculo instillandum.—R. Pulv. subtil. tut. drach. ii. alumin. gr. v. axung. porcin. drach. iii. misce, fiat s. a. ung. cujus pauxillum inter palpebras immittendum.

made into the lower Part of the Cornea to let out the Water; after which a proper Compression must be kept on the Eye, and strengthening Applications administered frequently; it is often necessary to let out the Water several Times (y).

106. This

(y) I have seen this Disorder frequently; three of the Patients had the Water let out repeated Times, and notwithstanding that different Means were used, the Swelling always returned as large as at first. *Blancard* gives two Cases of the Hydrophthalmia; 1. Of an *English* Nobleman labouring under this Disease, who had always a sharp Pain of the Eye when he eat any thing salt or sour. He tried many Remedies, but received no Benefit. 2. A young Man, after an Inflammation of the Eye, was seized with an Hydrophthalmia; the Water was four Times evacuated, but collected anew; the fifth Time it was let out, and by the Help of Pressure a Relapse was prevented, but he lost the Sight of his Eye. *Oper. vol. ii. cap. 13.*—A Student of Divinity labouring under an Hydrophthalmia, (which not only disfigured him much, but affected the Sight of his Eye) after taking a great many Medicines without receiving any Benefit, had the Water let out by an Orifice made at the Part where the Needle is commonly introduced in couching a Cataract. After the Operation his Eye was anointed

106. This Disorder frequently remains obstinate, and resists every Method of Cure that is attempted; and when the Swelling is got the better of, it is commonly attended with an Obscurity of Vision, if not with a total Loss of Sight of the Eye affected.

INTERNAL HYDROCEPHALI.

107. Water has been found in large Quantity between the Cranium and Dura Mater (2),
or

Morning and Evening with Vipers Fat, and Pledgets wet with camphorated Spirit of Wine kept constantly applied to it: notwithstanding which the Water collected anew. It was again perforated, and the same Remedies applied, while a continual Pressure was kept upon it with a concave Piece of Lead just large enough to cover the Eye. By this Manner of Treatment the Eye, in a few Months, was in a good State. *Heister's Observat. p. 589. obs. 527.*—*Nuck* mentions a Case where the Eye was reduced to its natural State by frequently letting out the Water, and keeping a Pressure upon it with a Piece of Lead. *De Oculor. duclibus aquos. cap. 2.*—*Boerhaave* says he was twice so lucky as to cure this Disease; his Method of Cure was by Bleeding, and giving
ing

or between this Membrane and the Pia Mater (*a*), or between the Pia Mater and Tunica Arachnoidea (*b*); and Hydatides have been ob-

ing strong mercurial hydragogue Purges, by letting out the Water frequently, and then keeping Pledgets dipped in Spirit of Wine applied to the Eye, and compressing it with a Plate of Lead. He says an Atrophy of the Eye generally succeeds the Cure of this Disease. *De Morb. Oculor. sect. 165. p. 170.*

(*z*) Five Pounds of Water were contained between the Skull and Dura Mater, in the Falx and Cavities of the Brain. *Bonnet. sepulch. anat. lib. i. sect. 2. obs. 45.* — *Trew* saw Water between the Skull and Dura Mater, between this last and the Pia Mater, and in the Ventricles of the Brain. *Act. Phys. Med. a. n. c. vol. iv. obs. 135.*

(*a*) *Blancard* found about two Pounds of Water between the Dura and Pia Mater of a Fœtus about seven Months old, and also a Vesicle that contained thirty Ounces of Water adhering to the Membranes of the Back-Part of its Mouth that lie before the Vertebræ. *Oper. vol. ii. p. 135.*

(*b*) *Van Sweiten* says he has observed this frequently in People who have died of the Lethargy. *Vid. Comment. in sect. 1217.*

served in the Substance of the Brain (*c*), and large Quantities of Water collected in its Ventri-
tri-

(*c*) See Cases of Hydatides in the Brain in *Haller's Disputat. anat. vol. ii. p. 845. by Bergen.*—In a Boy between six and seven Years of Age, who died of an Hydrocephalus, there was found a small Cyft full of Water near the Surface of the Brain, the Ventricles distended with Water, and a Number of Hydatides in the Plexus Choroides. *Medical Essays, vol. iii. art. 23.*—In the *French Translation* of this Essay there is a Case quoted from *Lancisi de subit. mort. lib. i. cap. ii.* A Person sixty Years of Age, afflicted with the Gout, was attacked with epileptic Fits, attended with Melancholy and Loss of Memory; he lived six Years afterwards, and then died suddenly. When his Head was opened, there was found in the cortical Substance of the Brain, immediately below the Pia Mater, a Hydatide about the Size of a Pigeon's Egg, filled with a serous and gelatinous Matter, and the cortical Substance on which its Basis rested seemed to be scirrhus.—*Wepfer* says, that a Surgeon of Credit (*Philip Oemelin*) assured him, that Hydatides in the Brain was a common Disease among the horned Cattle in *Switzerland*, and shewed itself by a Giddiness or Vertigo. When the Country People observe this, they strike the Head behind the Horns with a Hammer, to try if by the Sound they can distinguish

trices (*d*). These have all the Name of internal Hydrocephali. They bring on the Symptoms of
a com-

tinguish any preternatural Hollow below, and if they imagine they do, they immediately trepan the Part, put a Quill into the Hole, and suck out the Hydatides, if they lie near the Surface of the Brain, and so make a Cure: but, if the Hydatides lie so deep in the Brain that they cannot suck them out, they immediately kill the Creature. This Operation the Surgeon assured him he had seen done, and attended with Success. *De Apopleet. loco affect. p. 69.* He afterwards tells us, that he himself saw it tried upon an Ox afflicted with Giddiness, when a large Number of Hydatides were sucked out; but the Vertigo still continuing they killed the Creature, and, upon opening the Head, they found a Number of Hydatides in the Ventricles of the Brain. *Hist. Apopleet. 14.* These Histories although related by *Wepfer*, an Author of Credit, yet seem too much upon the marvellous; and, at any Rate, the Uncertainty of the Existence of the Disease from the Method taken to discover it, and the Danger of the Operation, will, in all Probability, prevent its being ever attempted on the human Subject.

(*d*) In the Year 1755 I saw a Child six Months old, whose Head was distended to a monstrous Size; after its Death the Head was opened, and there were eight Pints
of

a compressed Brain, to wit, Pain of the Head, Giddiness, Stupor; such Patients stare excessively, the Tears frequently flow, they are drowsy, their Senses dull; sometimes they become blind and deaf, and lose all the animal Faculties, till at last Convulsions, Lethargy, or Apoplexy put an End to their Miseries.

of Water in the Ventricles of the Brain. I have since seen several Hydrocephali in which there was from half a Pint to three Pints of Water lodged in these Cavities.—*Tulpius* found five Pounds of Water in the Ventricles of the Brain of a Boy of five Years of Age. The Brain at first seemed wanting, but it adhered every where to the Bones of the Skull, in form almost of a thick Membrane. *Obs. lib. i. obs. 24.*—And in the following Observation he says, he has twice seen about two Pounds in one of the Ventricles, without any in the other. *Ibid. obs. 25.*—*Vesalius* saw a Case of a Hydrocephalus where the Ventricles of the Brain were so much distended as to contain nine Pounds of Water. *Anat. lib. i. cap. 5.*—*Hildanus* took eighteen Pounds of Water out of the Ventricles of the Brain. *Cent. i. obs. 10.*—The Ventricles contained twenty-four Pounds of Water in a Child of a Month old. *Misc. Cur. a. n. c. dec. 3. ann. 1. obs. 10.*

108. Where the Head is not enlarged these Symptoms have been generally esteemed equivocal; but Dr. *Whytt*, *Professor of the Theory of Medicine in the University of Edinburgh*, acquainted me lately, that, from an accurate Observation of a Number of Cases, he thinks he has discovered the Symptoms by which Physicians may know certainly before Death when Water is lodged in the Ventricles of the Brain.—This Disorder, he says, may be divided into three Stages:

a “ In the first, which begins four, five or six
 “ Weeks, and sometimes much longer before
 “ the Patient’s Death, the chief Symptoms are
 “ a slow Fever, accompanied with a Head-
 “ ach, Loss of Appetite, and a Vomiting once
 “ a Day, or once in two Days, together with
 “ an Aversion to Light.

b “ In the second Stage, the Pulse, from being
 “ quick and regular, becomes as slow or slower
 “ than natural, but irregular; notwithstanding
 “ which the Patients are not relieved, their
 “ Skin continues to have a feverish Heat, they
 “ are

“ are unable to sit up, they moan heavily with-
 “ out being able to tell what ails them. They
 “ sometimes complain of seeing Objects dou-
 “ ble, they generally grow delirious, and some-
 “ times cry out in a wild Manner.

c “ In the third Stage, the Pulse, which had
 “ been for some Time as slow or slower than
 “ natural, rises again to a feverish Quickness,
 “ and the Patient becomes drowsy and coma-
 “ tose. The Pupils of the Eyes lose their Mo-
 “ tion and are dilated; the Cheeks are often
 “ flushed, and a *Subsultus Tendinum* with Con-
 “ vulsions, an Unability to swallow, and a la-
 “ borious Respiration, generally close the Scene.

d “ During the first Stage, it is very hard to
 “ distinguish the Disease. But when we meet
 “ with a Patient under fifteen or sixteen Years
 “ of Age seized with a Fever of no certain
 “ Type, and irregular in all its Accessions and
 “ Remissions; when in that Fever the Patients
 “ vomit once or twice a Day, or only once in
 “ two or three Days; when they shun Light,
 “ and

“ and complain of a Pain at the Crown of their
“ Head, or over their Eyes after the Fever has
“ continued for some Time, or of a Pain there-
“ abouts, that in some Days does not abate, as
“ the Headach in ordinary Fevers generally
“ does ; when these Complaints neither yield
“ considerably to repeated Vomits, gentle Pur-
“ gatives nor Blisters, there is Reason to suspect
“ that there is Water in the Ventricles of the
“ Brain. But as Worms and other Disorders of
“ the Stomach are sometimes attended with
“ most of these Symptoms, we are often at a
“ Loss to find out the Dropsy of the Cavities of
“ the Brain till it arrives at its second Stage,
“ when the Pulse begins to turn slow and irre-
“ gular ; for this Change of the Pulse super-
“ vening to the Symptoms of the first Stage is
“ almost an infallible Sign of Water within the
“ Brain, if at the same Time the Patient is
“ not relieved, and if the feverish Heat does not
“ abate with the Quickness of the Pulse, This
“ becomes still more evident when the Patient
“ is

“ is affected with a *Strabismus*, *Delirium* and
 “ *Coma*, and when afterwards the Pupils di-
 “ late and lose their Motion, and the Pulse
 “ becomes very quick, while in the mean time
 “ the Cheeks are often flushed, the Tendons
 “ start, and the Muscles are convulsed.”

109. This Disorder seldom attacks Adults, and as their Crania do not yield to the distending Water, one can only conjecture in such a Case, from the Symptoms above mentioned, what the Disease is (*e*). In Children, indeed, the
 Bones

(*e*) We have some Instances, though but few, of this Disorder having been observed after the Bones of the Head had become hard and firm, and the Sutures were close.—*Hildanus* gives an Account of a Lad, eighteen Years of Age, whose Head was distended to a very large Size with a Hydrocephalus, though the Bones of the Skull were firm and hard. The Disease had begun when he was three Years of Age, and he was subject to epileptic Fits. *Observ. Chirurg. cent. 3. obs. 19.*—*Du Verney* tells of his having found three Pints of Lymph in the Head of a Boy of nine Years of Age; the Bones of the Cranium were firm, and above one Sixth of an Inch thick. *Traité des Maladies des Os, Tom.*

Bones of whose Heads are not firmly united, they are separated by the Water farther than they ought to be, and leave larger Spaces between them, where sometimes the Fluctuation of the Water can be felt.

110. This Disorder for the most Part ends fatally; and we have scarce any well-vouched Instance of its being cured after the Water had distended the Cranium, and the Disorder was known for certain to be the Hydrocephalus, though many Authors alledge that they have cured what they imagined to be beginning Hydrocephali.

III. Corroborants, Cathartics, Diuretics, and Diaphoretics are to be employed according to the Exigency of the Case.—The Head is to be covered with a woollen Cap well fumigated

ii. p. 8.—*Van Sweiten* quotes a Case from *Betbeder's Hist. de l'Hydrocephale de Begle*, p. 35. where the Head was distended, though the Bones had acquired their natural Firmness, but they became quite thin and pellucid.

with

with Spices, over which a pretty tight Bandage is to be put (*f*); a perpetual Issue is to be kept running at the Bregma; or a Pea-Issue put at the lower Part of the Occiput.

112. Some Authors, rather than let the Patient inevitably perish, have thought it advisable to attempt a very uncertain and dangerous Operation, viz. to make an Aperture by which the Water may be evacuated; but hitherto wherever this Operation has been performed, the Event has been unfortunate (*g*), and the Patient died soon.

(*f*) A Child whose Head was much swelled, and the Sutures greatly dilated, was cured by Bandages alone, without any other Assistances. *River. Obs. commun. obs. vi.*—It is said in *Boerhaave's Praxis Medica*, that he cured the Hydrocephalus by giving some Purgatives, putting in an Issue, and afterwards bandaging and fomenting the Head. *Sec. 1204.*—A Boy six Years of Age, whose Head was as large as that of a Lad of eighteen, is said to have been cured by aromatic and spirituous Medicines applied to his Head, an Issue in each Leg, frequent Purgings, and the Use of Lixivium of Tartar in his Drink, and Aromatics in his Food. *Miscel. Cur. a. n. c. dec. 1. ann. 1. obs. 46.*

113. If

113. If this Operation is ever attempted, the Opening ought to be made with a Lancet, where a Fluctuation is to be felt, and at a Part where there is no Danger of wounding any large Artery, or venal Sinus of the Head. The Operator ought never to make Use of the Trocar for this Purpose, as it requires a forcible Push to make it perforate the Teguments, and its Point may penetrate further than is intended; neither ought he to attempt the Operation where the Water is situated in the Ventricles, or deep in the Substance of the Brain.

(g) A Surgeon opened the Bregma of a Child nine Months old, and let out a Pound of Water, but the Child died in about thirty-six Hours after. *Hildan. obs. chirurg. cent. 5. obs. 17.*—*Le Cat* let out the Water of a Hydrocephalus at different Times, by the Help of a broad-shouldered Trocar, the Cannula of which he let remain in the Wound. He covered its Orifice with a sticking Plaister, which he removed when he let out any of the Water, and put it on again when he thought he had evacuated a sufficient Quantity; and always afterwards bound up the Head tight with a capaline Bandage; notwithstanding which Precautions the Child died the fifth Day after the Operation. *Philosoph. Transact for 1751, 52. sect. 40.*

M

114. After

114. After a small Quantity of Water is let out, the Wound is to be stuffed, to prevent too great a Discharge; for worse Effects are to be expected from a sudden Evacuation here than any where else, because the weak Vessels of the Brain, and its soft Substance, cannot resist the Force and Rarefaction of the Blood impelled by the Heart; so that the Brain is soon overloaded with Blood when the Pressure of the Water is too suddenly taken away: a Sponge, or some such Substance, which allows a slow draining off of the Water, is the best and safest Application; for a Pipe introduced into the Wound, and allowed to remain there, may hurt the tender internal Parts. As the Water is thus drawing off, the Bandage on the Head ought to be drawn tighter and tighter, that the Cranium may be contracted in Proportion to its Contents.

If the internal Medicines that augment the Excretions are found insufficient to free an Adult from this Disease, Trepanning, which
is

is the only Remedy left, may be tried, in hopes that if the dropfical Water is collected on the Outside of the Brain, it may be let out. If the Water be seated in the Ventricles or Substance of the Brain, this Operation will be of no Service.

BASTARD HYDROCEPHALUS.

115. The Bastard Hydrocephalus is an hydropical Excrescence on the Back-Part of the Head, the Sac of which has an immediate Communication with the Ventricles of the Brain; it is a Sort of Appendix to the last named true Species of Hydrocephalus, and is seldom or never cured, but proves fatal in a short Time.

116. The Integuments are to be kept entire as long as possible; for the Opening such Tumors causes Death soon (*b*); and the external
Medi-

(*b*) *Ruyfch* has sometimes seen these Tumors larger than the Head of a new-born Foetus; and he remembers to
M 2 have

Medicines prescribed in Sect. 72. *a.* may be tried; but little or nothing else can be done for such young Patients as these generally are.

DROPSY of the SPINAL MARROW, or SPINA BIFIDA.

117. The same is to be said of the watery Tumors of the Spine, where the back Parts of the Vertebrae, or Os Sacrum, are wanting, and the Spinal Marrow so compressed as to pass unobserved, or to seem to be changed into Water (*i*).

118. DROPSY

have seen one larger than the Child's whole Body; he says they communicate with the Ventricles of the Brain, and that the Opening them destroys the Patient immediately. *Obs. Anat. Chirurg. Obs. 52.*

(*i*) My Brother, Dr. *A. Monro* junior, wrote to me, that, in Summer 1764, on examining a Case of this Kind, he found the Spinal Marrow compressed, and so closely adhering to the Back-Part of the Sheath, that at first it seemed to have been wanting, and was conjectured to have been melted down into a watery Liquor.

I have

DROPSY of the JOINTS.

118. A Dropsy of any Joint, especially of the

I have seen this Disease four Times ;—the first was a seemingly healthy Child, about fifteen Months old, who had such a watery Tumor on the Back, as large as an Orange, which I advised the Parents not to allow to be opened. I never saw the Child afterwards.—The second was a Child about nine Months old at the *Foundling Hospital*, who had such a Tumor on the Os Sacrum, and was under the Care of Mr. *Tomkyns* ; the Tumor burst, and the Child died the third Day after ; upon examining the Os Sacrum after Death, its spinal Process was found to be wanting.—The third was a Child about two Months old, and had a Tumor about the Size of a large Walnut on its Back, where the spinal Process of two or three of the *Vertebræ* were wanting ; the Tumor was twice opened, and the Child died when it was three Months old.—The fourth was a new-born Infant, who had a very large Tumor on the Middle of the Back, which when opened discharged above a Pint of Water ; it died the sixteenth Day after the Operation.

Ruyfch relates ten Cases of this Disease, which all proved mortal. *Obs.* 34.—*Blancard* met with two which had the

the Knee (*k*), has the common Symptoms described in Sect. 4—10. and seldom yields to any

same fatal Event.—Mr. *Malcolm*, Surgeon to the *Scots* Royal Regiment, told me, he once saw such a Tumor opened, and the Child died immediately.—A Child had fifty Ounces of Water within its Brain, a Tumor on the Occiput, and a divided Spine. *Bonet. sepulchret. anat. lib. i. sect. 16. obs. 4.*—See a similar Case, where the spinal Marrow at the Part where the Tumor was, could not be observed, and there were scarce any Vestiges of Nerves. *Misc. cur. a. n. c. dec. 2. ann. 2. obs. 158.*—A Child was born with a tendinous, or coriaceous Spot above the Os Sacrum, which extended itself into a large Tumor, and was extirpated. It contained more than a Pound of Water, and the Nerves of the Cauda Equina. The Child was always paralytic in the lower Extremities, and could not retain its Fæces or Urine. The Bulk of the Head diminished considerably when the Operation was performed, and it died the next Day. *Misc. cur. a. n. c. dec. 1. ann. 1. obs. 152. hist. 2.*

Wepfer gives an Account of a new-born Child, who had a watery Tumor of this Kind, situated on the right Side of the superior Vertebrae of the Loins, which was opened six Times. Three Ounces of Lymph were evacuated each Time, and the Wound healed, but after four Weeks the Head began to swell, and the Child died of a Hydrocephalus

any internal Medicines, whether Corroborants, Diuretics, Diaphoretics, or even the strongest Cathartics, be employed : more Service is to be expected from topical Remedies, such as sweating the Part with the Flame of burning Spirits ; or the warm sulphureous Waters of *Bath, Buxton, Aix, or Carlsbad*, falling from a Height upon it ; or the Application of Blisters, or of discutient Fomentations, Liniments, or Poultices ; or Issues opened in its Neighbourhood,

119. But if it resist all these Methods, and the

cephalus when it was eleven Months old. See *Observ. Medic. pract. de affect. capit. obs. 29.*

(k) My Father, in his Lectures, used to observe, that he never saw this Disease except in the Knee, where he had often seen it ; and that he had four Times cured it with strong Vinegar warmed and applied to the Part by Paper wet in it.—And Dr. *Simson* says he has seen Swellings of this Joint, when taken Care of at their first Beginning, cured by a Purge, and the Fall of cold Water, and at other Times by the Fall of warm Water. *Med. Essays, vol. vi. art. 20.*

Symptoms are violent, the capsular Ligament is to be punctured with a Lancet in the Part that is thinnest, and most free from Aponeuroses, Vessels, or Nerves, which is on the Inside of the Knee: for the Discharge of the Water in this Way sometimes makes a Cure (1); but too often the Operation is followed

(1) We have a Case related in the *Acta physico-medica*, in which an Incision, some Inches long, was made into the Joint of the Knee, on the Inside of the Rotula, and three Pints of Water let out; after which, by the Assistance of proper Dressings, and strengthening Fomentations, the Patient was cured, and had the Use of this Joint so well, that he could walk easily. *Act. phys. med. a. n. c. vol. viii. obs. 27.*—A Countryman found great Uneasiness for some Months, from a moveable hard Substance in his Knee, which he always felt upon walking; it generally made its Appearance under the Rotula, and on the Inside; the Parts about it were swelled, though to no great Height. Dr. *Simson* was consulted, who laying hold of it with his Finger and Thumb, cut into the Joint, and brought away this Body, which was about the Bigness of a Kidney-Bean, and with it about four Ounces of a thick pellucid Liquor. The Patient using his Leg that Day, such an Inflammation

lowed by Inflammation, Fever, and their Consequences (*m*) ; and the Matter growing acrid, Amputation becomes the only Remedy.

120. The best Method of preventing these

Inflammation and Pain arose, that it was twelve Months before it could be altogether removed ; but at last, by syringing Water upon the Part, and laying a Caustic near the Knee, the Patient was cured, and walked without any Impediment. *Med. Essays, vol. iv. art. 20.*

(*m*) A Patient, in whom the Fluctuation of Water within the capsular Ligament was evident, had a Puncture made with a Lancet into the Joint on its Inside ; near a Pound of Water was let out by this Orifice, which was dressed with a little Lint and a Bit of Plaister, the whole Joint being covered with Aromatics and Stimulants : he took likewise some hydragogue Purges. Nevertheless, the Water was again collected in a few Weeks, when another Surgeon made a large Incision into the Cavity of the Joint on the Outside of the Knee ; the Consequences of which were, sharp Pains, attended with a smart Fever and high Inflammation, which ended in Suppuration, and an excessive Discharge ; this obliged him to take off the Limb above the Knee, in order to save the Patient's Life, which was in imminent Danger, from a wasting Hæctic.

bad

bad Consequences of Inflammation, after the Capsula of a Joint is opened, is to perform the Operation in the Patient's Bed, with the Member laid nearly in the same Posture as the Patient can keep it in afterwards ; to recommend absolute Rest of the Limb till the Wound in the Membranes is cicatrised (n) ;
and

(n) The two following Cases shew the Necessity of using the Precautions here mentioned.

In the Year 1758, a Man was admitted into St. George's Hospital to have a moveable cartilaginous Substance about the Size of a small Bean, taken out of the Joint of his Knee. The late Mr. *Hewet* made the Patient come up to the Operation Room ; and having brought the moveable Substance to the Inside of the Knee, and laid hold of it with his Finger and Thumb, he made an Incision upon it, and brought it away ; a Quantity of a pellucid Liquor followed. The Patient felt but little Pain from the Operation, and was immediately carried to Bed ; but next Day finding the Knee easy, he walked across the Ward in which he lay, which brought a violent Inflammation on the Joint, and notwithstanding that he was blooded freely, and other Means used, it was four Months before the Inflammation went off, and the Joint of the Knee remained stiff ever after.

Some

and if the least Symptom of Inflammation appear, to bleed freely, and follow the antiphlogistic Method of Cure.

Some Months after this another Case of the same Kind was admitted into the Hospital, and was under the Care of Mr. *Hawkins*, who at first declined performing any Operation, from the violent Inflammation he had seen follow the Extraction of the cartilaginous Substance in the former, and in some other Cases of the like Kind ; but the Patient persisting in his Resolution of having this moveable Substance taken away, Mr. *Hawkins* at last consented to comply with his Request. He made the Patient go to Bed, and having put the Member nearly in the Situation he intended it should remain after the Operation, he brought the moveable Substance to the Outside of the Knee, and having taken hold of it, cut upon it, and brought it away ; a small Quantity of a clear glary Liquor followed. He covered the Wound with a little dry Lint and a Pledgit, and put a slight Bandage over it. Having laid the Member in a proper Posture, he desired the Man not to move it for some Days, warning him of his Danger if he did not keep strictly to the Directions given him. The Patient punctually obeyed the Orders he received, the Wound healed as kindly as a common Puncture in bleeding ; and he was well and walking about in a short Time, without the least Accident happening during the Cure.

DROPSY

DROPSY of the BREAST.

121. Water collected in one or both Cavities of the Thorax is at first difficult to discover, the Ribs and tense short intercostal Muscles not allowing the Water to extend itself outwardly, or the Fingers to feel any Fluctuation (o). But if a Person breathes laboriously, with a Sense of Weight at the lower Part of the Thorax, when the Trunk of the Body is erect, and towards the upper Part when the Body is horizontal, and feels with all a sensible Fluctuation while he changes Postures, there are good Grounds for suspecting that a Fluid is collected in the Thorax ; and, if no Symptoms of Inflammation and Suppuration have preceded, we may justly conclude this Liquor to be Water ; and there will be the greater Probabi-

(o) See *Reimmannus's* Dissertation on the Uncertainty of the Signs of this Disease, in *Act. Phys. med. a. n. c.* vol. i. obs. 170.

lity of this being the Case, if at the same time the Patient makes but a small Quantity of Urine, with a lateritious Sediment, and hath œdematous Swellings of the Feet, or other Parts of the Body.

122. When one Cavity of the Thorax only has Water in it, the Patient lies generally on that Side, the Breathing becoming more difficult when laid on the other ; and if, on comparing the two Sides of the Breast, the affected one is larger than the other near to where the Diaphragm is fixed (*p*), there is

(*p*) The Swelling of the lower Part of the Thorax, is a Symptom that sometimes, though but seldom, attends this Disease. I have seen a considerable Number of People who have died with Collections of Water or Pus in the Cavity of the Thorax, but I never but once could observe any external Swelling from the Liquor contained in the Cavity of the Thorax itself : We have many Examples of it among the Observators, one in *Willis Pharm. ration.* p. ii. *sect.* 1. *cap.* xiii. and two in the *Histor. morbor. Uratistav.* 1699, 1700. one quoted from *Fonseca: ibid. de hydrop. pest.* *cap.* i *sect.* 7. and one in *Med. Essays*, vol. v. art. 59.

Reason

Reason to conclude that Water is collected in the enlarged Side.

123. I do not know if it is always accompanied with that Symptom which *Riverius* mentions as a sure Pathognomic, viz. “ That
 “ the Difficulty of breathing is increased when
 “ the Patient lies down to sleep, and grows
 “ worse during the Night, becoming milder
 “ with the Day (*q*) ; or if the Scrotum be-
 “ comes hydropical before the Belly or
 “ Limbs (*r*).” I never observed these Sym-
 toms

(*q*) “ Quibus hoc unicum addere licet, tanquam pa-
 “ thognomonicum, & quo solo hydrops pectoris a cœteris
 “ difficultatis respirandi speciebus distinguitur. Quando
 “ nimirum spirandi difficultas primo quoque somni tempore
 “ invadit, eumque intercipit, ac per noctem magis urget,
 “ procedente vero die sensim lentescit.” *River. Prax. med.*
lib. vii. cap. 5.

(*r*) “ Id vero notatu dignissimum est, quod scrotum in
 “ hoc hydropis genere attollatur in tumorem, antequam
 “ vel venter vel pedes intumescant. Neque enim semel
 “ sed

toms myself, nor have seen them generally mentioned as constant and peculiar to this Disease.

124. Diaphoretics, Corroborants, and Purgatives, are very useful in this Species of the Dropsy; but Emetics, if the Patient can bear them without Danger of being suffocated during their Operation, are much more beneficial. Diuretics (s) sometimes make a Cure :
for

“ sed iteratis vicibus deprehendimus, quod jam tumido
“ scroto pedes œdematoso tumore corripantur.” *Hist.*
morb. Uratislav. 1699, 1700. de hydrop. pector. cap. I. sect.
8.—See such a Case in *Hoffman*, where the Scrotum
swelled and not the Abdomen : *de hydrope, obs. 7.*

(s) R. Rad. scil. gr. v. pulv. ari. comp. gr. x. zinzib. gr.
v. syrup e cortice aurant. q. s. ut fiat bolus; talis bis die devo-
randus.—vel R. Confect. cardiac. scrup. i. sal. succin. gr. v. ol.
stillat. juniper. gutt. ii. misce. Capiat dosin. hujusmodi ter vel
quater die.—vel R. Ciner. genist. scrup. i. vin. amar. unc. ii.
misce. Haustulus talis quater die repetendus.—vel R. Aq.
menthæ unc. i. lixiv. tartar. drach. dimid. syrup. zinzib. unc. dimid.
misce. Propinet haustulum talem mane & vespere.—vel R. Tinct.
flor.

176 OF THE DROPSY.

for the Kidnies being free from Compression, permit the Water to pass off more freely than

flor. martial. drach. fs. aq. menth. piper. unc. i. syrup. e cortic. aurant drach. ii. capiat ter die.—vel R. Baccar. juniper. unc. ii. contus. affunde vin. rhenan. unc. xii. stet. per tres dies, & colaturæ adde aq. raphan. comp. unc. i. capiat unc. ii. ter vel quater. die.—vel R. Fol. cochlear. horten. nasturt. aquatic. baccar. juniper. singul. unc. ii. tartar. lixiv. unc. i. infunde per quatrimum in cerevis. veter. lib. v. dosis est ad lib. fs. die.—vel R. Summit. H. absinth. virid. genist. ana unc. dimid. rad. gentian. drach. ii. infunde per biduum in aq. fontan. fervid. lib. i. colaturæ capiat. unc. iii. mane & vesperi.

The Emperor Maximilian II. found great Advantage from these Sort of Medicines: he laboured under a Dropsy of the Breast for twenty Years, and used to make sometimes six Pounds of Urine in a Day, which always relieved him; at last the Passage by the Kidnies having been stopt, he was suffocated. *Sennert. pract. lib. ii. p. 2. cap. xx.*

I had the following Case from Dr. Fothergill: A Gentleman of a fresh Complexion, full, lax habit, and a large Make; in Respect to Liquors, for the most Part, temperate, with a good Appetite, and ample Means of gratifying it; about the fifty-sixth Year of his Age, perceived, upon a little unusual Motion, an Obstruction to his Breathing, attended with a Palpitation of the Heart.

These

than in the Dropsy of the Belly. Issues and Setons in the Interstices of the Ribs, are known to

These Complaints gradually increased so much as to induce him to consult his Physician, to whom he gave the following Account.

That on walking one hot Day, after having spent an Hour or two in Business, in a Room crowded with Company, he found such an uneasy Straitness of the Wind-pipe, just above the Sternum, that it seemed as if a Bur, as he termed it, stuck there, and hindered him from breathing with his usual Freedom ; that at Night, upon going to Bed, he had a Palpitation of the Heart, and a greater Difficulty in finding such a Posture as he could lie in with Ease, than he had before experienced.

It was not every Night he found himself thus afflicted ; sometimes he had three or four bad Nights successively, in which he was either obliged to sit up most Part of the Night, or altogether prevented from sleeping when able to keep in Bed.

Things had continued in this Situation some Months. His Countenance was then fresh and florid ; his Breathing upon Motion somewhat laborious ; he coughed but little, and this rather voluntarily, to fetch up something, that to him seemed obstructing the Wind-pipe, than from an Irritation of the Lungs themselves. His Pulse was extremely

N

irregu-

to have done remarkable Service in the various Diseases of the Breast.

125. When

irregular, never beating five Strokes alike, but varying incessantly, either in respect to Frequency, or Strength, or both; his Urine was high-coloured, depositing for the most Part a copious Sediment, of a Colour betwixt the Lateritious and Carnation; his Stools regular in every Respect; he found himself commonly easiest when Lax; and his Breath laborious if ever so little Costive. He had no Heat, Thirst, dry Tongue, or any Symptoms of a Fever, except a high-coloured Urine, which was accounted for from its being in small Quantities. No peripneumonic Symptoms, except laborious Breathing; no Appearance of a humoral Asthma; nor was it apprehended that a convulsive one could produce just such Appearances, especially as the Irregularity of the Pulse was not less when the Breathing was free and easy, than when it proceeded to such a Pitch as to oblige the Patient to rise out of Bed at Midnight to avoid the Danger of immediate Suffocation.

As the Patient had lived in such a Manner as might seem to have intitled him to the Gout, and he was then at an Age when the first Attacks of this Disease are most commonly irregular, this likewise was taken into Consideration; though the constant Irregularity,
of

125. When the means above proposed fail, the only Method left is to make an Aperture into

of the Pulse rather seemed to indicate, that something more permanent was the Cause than the gouty Matter, which, whenever it attacks these unsuspected Parts, most commonly allows of some, though oft uncertain and short Vacations. After moderate Evacuations, by bleeding and purging, were first premised, a Course of Gum Pills, Extract of the Bark, Chalybeats in very small Doses, was recommended, with some Balsamics intermixed. No Increase of the Symptoms being observed from this Method, it was persisted in some Time; the Air and moderate Exercise on Horse-back proposed, and a due Regard to Quantity as well as the Quality of Aliments. A longer Truce seemed to be gained by this Method than had been perceived from the first Attack; but as the Winter approached, this Calm was often interrupted, frequently without any manifest Cause; the Patient being often obliged to rise after he had been an Hour in Bed, and spend the remaining Part of the Night. This soon brought on an œdematous Swelling of his Legs, Heaviness by Day, Inquietude by Night, and the evident Symptoms of an *hydrops pectoris*.

into the affected Side of the Thorax, which has frequently been done with Success (s);
this

By the Use of the following Remedy, viz. *R. Sapon. venet. scrup. i. g. ammon. gr. x. pulv. scillar. siccat. gr. iv. syr. simp. q. s. f. bol. sumend. 6ta q. h.* near a Gallon of Urine was discharged in one Night, which lessened the Dyspnea, abated the anasarcaous Swelling that had spread even to his Hips and Belly, enabled him to continue quietly and easily in Bed thro' the Night, and gave him and every one about him Hopes of a speedy Amendment. He enjoyed this Tranquillity a Month or six Weeks, the Irregularity of his Pulse nevertheless continuing, though remarkably less after this Evacuation of Urine; once he seemed during Summer to have acquired firm Health, his Pulse becoming somewhat less intermittent, and the other Symptoms disappearing; but this was only a longer Interval than ordinary. The returning Winter brought with it his former Complaints; and though Fontanels, Blisters, Diuretics, Purgatives, and Corroborants intermixed, were tried, under the Direction of some of the ablest Persons of the Profession, his Disorder increased, and he was at last suddenly suffocated by the Load of Water in the Thorax.

One Thing may be necessary to remark in respect to the Use of Squills, which is, that when ever one would give them

this Perforation should be made above the Place commonly recommended, the Diaphragm

them as Diuretics, the proper Dose seems to be that Quantity which will not produce a Nausea, at least a lasting one. And though, in the Instance before us, four Grains of the Powder gave the Stomach no Offence, yet in most People one Grain and a half, or two at most, will produce this Effect. This Remark of the Doctor's is just, for although some People's Stomachs will bear eight or ten Grains without nauseating, yet, in general a few Grains produce either the Effects he mentions, or a purging.

(s) Physicians rather seem too cautious about ordering this Operation both in Dropical and in Phthical Cases. It can be performed with the greatest Safety to the Patient, and I am persuaded that if it was attempted oftener, the Lives of many would be preserved who die suffocated with Pus or Water.

See in my *Account of the Diseases most frequent in the Military Hospitals in Germany*, page 118. the Case of a Soldier who died of the Hydrops Pectoris, but whose Life would, in all Probability, have been preserved, had he allowed the Operation to have been performed which was repeatedly proposed to him.—In *Willis* we have the Case of a young Man, who from too much Exercise fell into a Dropsy of the Breast; his left Side swelled, and a Number of bad Symptoms appearing, the Doctor ordered an Incision to be made between

phragm being connected to Ribs higher than the ninth or tenth.—If the Patient ever had a Pleurisy,

the sixth and seventh Rib, to let out the Water ; a Cannula was put into the Orifice, and the first Day there were about six Ounces of a thick white coloured Liquor, like Chyle, let out ; the second, about as much ; on the third, the Liquor run off too freely, and the Patient became faint and feverish, on which Account the Doctor allowed no more to be let out for two or three Days after, and then but a small Quantity every Day. By this Method the Patient began to recover his Health and Strength, so that he could at last ride and take his usual Exercise. All this Time he had but very few Medicines, only after the Operation, some gentle Cordials, an Anodyne, and vulnerary Decoction were given. In a few Months the Patient thought himself quite recovered, and took out the Cannula ; but the Wound was no sooner healed than his Disease returned, and he was obliged to have a new Aperture made, and the Cannula put in again ; he soon got well, but was obliged to keep the Cannula in ever after. *Pharm. ration. p. 2. sect. 1. cap. xiii. de hydrope pectoris.*—A Woman about thirty Years of Age, labouring under both an Ascites and Dropsy of the Breast, was cured by letting out the Water first from the Abdomen, and then from the Thorax. After the Operation she was twice purged, took

Pleurisy, or other acute Pain in that Side, the Aperture is not to be made near the Seat of the

an Opiate Morning and Evening, and for some Time after observed a very strict Regimen of Diet. *Memoir. de l'Acad. des sciences*, 1703.—*Morand*, in a Case which appeared desperate, put a Trocar into the Thorax, and let out six Pints of Water; after the Water there came away some Pus. Seven Days after, the Difficulty of Breathing increased, and he performed the Operation of the Empyema, and there was discharged from the Thorax five Pints of Water, and a Quantity of Matter; after this the Patient recovered daily. *Mem. de l'Academ. de Chirurgie*, tom. ii. p. 547.—*Van Swieten* quotes *Bianchi* for having performed this Operation with Success. *Comment. in sect.* 1219. *Boerhaav. Aphorism.*—*Mons. de Senac*. in his *Traité de Cœur*, gives an Account of a Groom in the King of France's Stables, who after a Pleurisy was seized with such a Difficulty of Breathing, that he seemed as if he could not live four Hours, when Dr. *Senac* ordered the Operation of the Empyema to be performed. There was let out by the Orifice six Pints of a clear yellow watery Liquor, with an immediate Relief to the Breathing. The Wound continued to discharge for some Days, and the Patient got well, and was at the King's Hunt at the End of a Month. *Lib. iv. Chap. v.*—In the same Place we have an Account of

N 4

a Man

the Pain, for there the Lungs and Pleura probably adhere ; by which Means the Operator, instead of penetrating into the Cavity of the Thorax, may be in Danger of wounding the Lungs.

126. When the Perforation is made, the Water is to be let out slowly, lest the Lungs being too suddenly freed from Compression, become unable to resist or transmit the Blood flowing into them, and the Patient be thereby suffocated. To prevent this, the Belly should be pressed with a Belt, which is to be gradually drawn tighter, to press the Diaphragm upwards as the Water runs out ; and if the Quantity of Water be very great, Part of it only must be evacuated at once. At every Dressing the Air that may rush in should be warmed ; for

Man addicted to drinking, who was almost cured by the same Method. When all the Symptoms were gone but a little œdematous Swelling of his Legs, by the Advice of a Quack he applied Blisters to them, which brought on a Gangrene, of which he died. *Ibid.*

which

which Purpose Vessels filled with warm Water are rather to be used than Charcoal, or any other Substance which emits suffocating or irritating Steams; and when the Orifice is to be dressed, the Air which entered by the Wound is to be squeezed out by the Patient's Efforts in breathing.

127. The Water being evacuated, the Patient must persist long in the Use of proper Medicines, especially Diuretics.

DROPSY of the PERICARDIUM.

128. The Dropsy of the Pericardium can scarce be certainly known till after Death by Dissection; for all the Symptoms of this Disease that have been specified by the most accurate Physicians are ambiguous (*t*), and attend

(*t*) Water is often found in the Pericardium of those People who die of an universal Dropsy. *John Cunningham,*
a Middle

tend other Diseases likewise ; for instance, an unequal Pulse, an Uneasiness in lying, a frequent

a Middle aged Man, was admitted into St. George's Hospital, on the 30th of *April*, 1759, in the last Stage of an universal Dropsy, and died on the 7th of *May*. Next Day his Body was opened ; the Thorax and Abdomen were both full of Water, and the Pericardium distended with an acrid Lymph. The Heart was so small that at first we could scarce believe it to be this Organ, its Surface was eroded, and adhered to the Pericardium in some Places ; the Liver was hard, and the Intestines adhered to one another in many Places.—*Peyer* mentions a Case where there were three Pints of an acrid turbid Liquor in the Pericardium which had eroded the Surface of the Heart. *Vid. Scholium. ad cap. vi. Parerg. anatom. & medic.*—*Bonetus* gives an Account of the Dissection of a Man who died of the Dropsy, in whose Pericardium there were found 30 Ounces of Water. *Lib. ii. sect. 1. obs. 60.*—In a Patient who died of a Cough and Asthma, the Thorax and Pericardium were full of Water, the Lungs stuffed with a viscid Matter, and a Number of schirrous Tubercles and stony Matter dispersed through their Substance ; and the Liver and Spleen were schirrous. *Ibid. obs. 41.*—*Piso* tells us of one *Jacob Loret*, who had long laboured under a Palpitation of the Heart and Difficulty of Breathing, of which he died ; upon Dissection,

quent Necessity of sitting down, an Oppression within the Sternum after Motion, Difficulty of Breathing, attended with a Sense of Pain and Restlessness, either no Cough at all, or a very moderate and dry one; all which Symptoms become milder, or go off altogether when the Patient is at Rest (u).

129. Could

Dissection there were found several Pints of Water in the Pericardium. *De seros. colluv. sect. 3. cap. ii. obs. 39.*

(u) *Franciscus Albertinus* gives the following Account of this Disease: “Hydropem pericardii, qui ex se ipso & solus infestat, hisce indiciis, aliqua saltem ex parte, ab aliis vitiis discriminari, ægrotantium observationes & eorum extispicia me monuerunt. Pulsus igitur comparate molles potius frequentes, ac parvos sibi adjungere consuevit, ubi structura cordis sive immodice flaccida evaserit, sive hic illic in suis fibris inceperit fracescere, sive restagnans in pericardio humor lentus, sive mere aqueus sit. Parvos vero frequentiores adhuc, vibratos, ac tenfos, cum sapor ejus salinus & vellicans est. Exiles etiam, celeriores, deficientesque, si tanta humoris copia in pericardio contineatur, quanta fere maxima contineri in eo potest. At ea pul-
“ sūs

129. Could the Dropsy of the Pericardium be discovered, its Cure may be attempted by the Medicines proposed for the Cure of the Hydrops Pectoris, sect. 124 ; but it seldom yields to internal Remedies ; and it would be a

“ sùs inæqualitas aliis cordis vitiiis communis est. Tussim
 “ quoque vel nullam vel modicam adjunctam habet & fere
 “ siccam five cum sputis tantum salivalibus. Difficilis in
 “ eo decubitus & frequens residendi necessitas vix unquam
 “ incidit ; eaque interdum a cibo, potu, animi aut corporis
 “ motu, etiam si in lecto motus exerceatur. Et quamvis
 “ a mediocri quocumque locali motu ingravescat motus
 “ cordis, ad tremorem accedens, & una cum eo spirandi
 “ difficultas, five potius apnœa, & ad flernum oppressio
 “ cum sensu doloris & jactatione contingat ; hæc tamen in
 “ ægroto, ubi moveri desiit & quieti se tradidit, si non om-
 “ nino, at maxima ex parte evanescunt ; modo ne iis sali-
 “ nis aculeis humor pericardii refertus sit, a quibus irrite-
 “ tur & corrodatur superficies cordis, quem ad modum eam
 “ leviter corrosam in muliebri cadavere conspeximus. Nec
 “ absimilia symptomata, licet solem occasione concitatoris
 “ motus ille quoque patiuntur, in quibus non nihil cras-
 “ sius alicubi, vel quas membraneo vinculo laxè cordi alliga-
 “ tum pericardium invenimus.” *Comment. acad. Bononiens.*
vol. i. p. 389.

bold

bold, not to say a rash Attempt, to make an Aperture into the Pericardium (*w*).

ASCITES

(*w*) *Mons. de Senac* says, if this Operation is ever thought necessary, that we may avoid wounding the Heart, Lungs, and Mammary Artery, by performing it in the following Manner: Thrust a Trocar between the third and fourth Rib of the left Side, at two Inches Distance from the Sternum; directing its Point obliquely towards the Origin of the Cartilago ensiformis, and keeping as close as possible to the Ribs. *Traité de la structure de Cœur, tom. ii. Livre iv. chap. v. p. 365.*

We have, however, Examples of the Pericardium being opened without destroying the Patient, in the *Commerc. literar. Norimberg, 1734, Hebd. 35. sect. 4.* Dr. Stork tells us, that he caused the Sternum to be perforated after a Wound of the Breast, and let out six Pounds of Blood diluted with Water. By his Orders also the left Side of the Thorax of the same Man was opened, from which more than nine Pounds of a bloody gelatinous Matter issued. The Patient lived a Month after the Sternum was perforated, and three Days after opening the Thorax. When the dead Body was examined, a Wound an Inch long appeared in the Pericardium, which contained some Pus and adhered to the Heart. There was an Impression on the Heart, which he judged to have

ASCITES.

130. Water collected in the Abdomen or Belly is called Ascites: the Water here sooner becomes acrid than in other Dropsies, by the Agitation it suffers in different Postures and Motions of the Body, by the Mixture of Bile transuding through the Coats of the Gall-Bladder, and the putrid Miasmata which penetrate through the Intestines (x).

have been a Wound there.---*Galen* tells of a Boy, part of whose Sternum was carious, which he ordered to be cut away; and finding part of the Pericardium corrupted, took it away also, and left the Heart quite naked; and yet the Boy soon recovered. *De anat. administrat. lib. vii. cap. 13.*

(x) *Du Verney* the younger tells us, that the Water of the Ascites is of various Colours and Consistencies. When it is like Citron-coloured Ptisan, a little mucilaginous, of an urinous Smell, and a little salt to the Taste, it is the least dangerous, and the Danger increases as it recedes from these Qualities. *Mem. de l'Acad. des Sciences, 1703.* See his other Prognostics in the same Place.

When

When the Patient is erect, the Water bears chiefly on the hypogastric Region; but when he lies in an horizontal Position it distends the inferior Region of the Loins, and the Diaphragm bears a considerable Pressure. The chylopoietic Organs, macerated and soaked in the Water, are weakened and do not perform their Office sufficiently (y), but being irritated by the Waters, or rubbed against one another while they are thus soaked, inflame and grow together (z). The Kidneys being compressed, secrete but little Urine, so that the Blood is not

(y) The Stomach and Intestines being weakened by soaking in Water, and having little Stimulus from the mild juices which the Patient's watery Blood furnishes, cannot enough resist the Rarefaction of the Air they contain, but are often distended by it to a larger than ordinary Size; on which Account the Ancients mention the Ascites and Tympany as frequently conjoined in the same Patient.

(z) Whoever has seen many hydropical Bodies opened, must have often observed the Intestines in the Condition here mentioned; and all the Observators are full of such Histories.

free

freed of its superfluous watery Liquors, and therefore furnishes Matter to increase the Disease. When the acrid Liquors are absorbed, they create Thirst, Cough, Fever, Inflammations, and their Consequences.

131. The Ascites often takes its Rise from scirrhus or other confirmed Obstructions of the Abdominal Viscera, yields to no Remedies whatever, and when the Water is drawn off by tapping is soon collected in as great Quantity as ever.— When it is occasioned by a lax and dissolved Blood, the Consequence of some acute Disorder, and there is no confirmed Obstruction, it is sometimes cured.

Ascitical Patients sometimes die suddenly without any evident Cause, even when they seem to be in a fair Way of Recovery, and most of the Water is evacuated (*a*). This oftenest happens where the Ascites is complicated with anasarcaous Swellings,

132. In

(*a*) We meet with frequent Instances of this in large Hospitals.—*Richard Cowley*, a middle-aged Man, was admitted into

132. In this dangerous Disease, 1. Internal corroborant Medicines, Purgatives, Diuretics, and Diaphoretics, being applied near the Seat of the Disease, have a better Chance of relieving the

into *St. George's Hospital*, the 20th of *December* 1758, for an *Ascites*, attended with anasarcaous Swellings of his Legs, which had come about six Weeks before, from drinking cold Small-Beer when he was very hot. He had been cured of a Dropsy in *St. Bartholomew's Hospital*, about eight Months before.— He was immediately put on dry Diet, and was ordered eight Grains of the Squill Pills, with two Ounces of the medicated Ale, Morning and Evening ; and a Dose of Jalap and Nitre twice a Week ; by continuing this Course, all his dropfical Complaints were removed by the End of *January* ; and he was going to have been discharged the 3d of *February*, when he complained of a Pain in his right Thigh and about the Os Ilium, which was relieved by fomenting the Parts with an emollient Decoction, and rubbing with the volatile Liniment ; he had no Fever, and his Pulse was calm and regular ; he died suddenly the 5th in the Morning. His Body was opened next Day, there was no Water in any of the Cavities, nor any Mark of diseased Viscera, except a Firmness of the Substance of the Liver, and some slight livid Spots on the Intestines ; nor was there any Inflammation to be observed

the Patient than in many other incysted Dropsies; and, 2dly, the Water can be more easily and safely let out than in many other Species of them.

133. As in this Disease the more is drunk the greater is the Thirst, and Liquids increase

about the Thigh or Ilium.—*Lancelet Tod* was admitted into *St. George's Hospital* the 14th of *December* 1763, for an universal Dropsy, which at first yielded to no Remedies.—On the 2d of *February* he complained of a Difficulty of Breathing, and his Pulse was quick, for which Complaints he lost eight Ounces of Blood; on the 4th, his Breathing being easier, he was ordered a Scruple of *Dover's Powder* to be taken at Bed-Time, every other Night, in a Draught of warm Sack-Whey, and the Dose was gradually increased to a Drachm, which sweated him profusely, and at first diminished his Swellings; but that Effect ceasing, he was ordered, on the 9th of *March*, to take daily two Drachms of the Crystals of Tartar dissolved in Wine-Whey, and to continue the Use of the Sweating-Powder; after taking this Medicine for some Days, he began to make Water freely, and his dropical Swellings to diminish daily, and he seemed brisk and lively; but on the 26th of *April* he died suddenly; his Friends carrying off the Body we had no Opportunity of examining it.

the

the Disorder; so, in order to cure it, the severest Abstinence is to be prescribed, and the Thirst must be mitigated or amused by moistening the Fauces (*b*). Friction (*c*) and Exercise ought to be used as much as the Patient can conveniently bear; and Bandages, put round the Abdo-

(*b*) Dr. Mead knew two Persons, who, by long abstaining from Drink, were entirely cured of a severe Ascites. *Monit. Medic. cap. viii.*

(*c*) * * * We formerly mentioned that rubbing the Belly with Oil had given Relief in many Cases, and had cured some; the following Account (which I had from the same Gentleman from whom I had several others mentioned in this 3d Edition) serves to confirm its Use. A Woman whose Belly was much swelled, after taking the following purging Medicines frequently without much Benefit,—*R. Pulv. jalap gr. xvi. nitri gr. x. aq. fontan. aq. cinam. simp. singulorum drachmas vi. oxymel scillit. drachmas tres, M.* was ordered likewise to foment the Belly, and to rub it strongly with Oil Morning and Evening; soon after beginning this Course, the Swelling of her Belly began to subside, and by continuing it for some Months went entirely away. By the 7th of February 1763, her Menfes which had stopt returned; and the Cure was compleated by her drinking a Gill of an Infusion of the lesser Centaury every Morning.

men, and drawn tighter as the Water is evacuated, have been found of the greatest Service. —Topical Corroborants, and Stimulants, are sometimes of Use, and are even said to have cured the Disease (*d*). Emetics (*e*) are very often

(*d*) Two People were cured of the Ascites, by a Fomentation composed of Aromatics boiled in Wine, and frequently applied to the Belly. *Misc. cur. a. n. c. dec. 1. ann. 3. obs. 147.*—*Pontæus* recommends a Poultice of *Morsus Diaboli*, made by putting the Herb over the Fire, in a dry Kettle, till it is moistened with its own Liquor. This, he says, applied to the Abdomen and Reins, causes Sweat, and cures the Dropsy. *Philos. Transact. abridged, vol. 3. chap. iv. art. 52.*

(*e*) *R. Vini. ipecacoan. drach. x.——vel R. Pulv. rad. ipecacoan. scrup. i. tartar. emetic. gr. iii.——vel R. Vin. antimon. unc. i.*

“ Etenim post duas vel tres vomendi vices per infusio-
 “ nem croci metallorum excitatas, aquæ non tam medi-
 “ camenti vi secretoria elici videntur, quam ruptis quasi
 “ repagulis & claustris reſeratis pleno alveo effundi,
 “ quod satis constat ex earundem eruptione atque im-
 “ petu sæpe facto, inter ipsa vomendi spatia sive intervalla.
 “ Hoc interim observari velim, quod si leviusculo aliquo
 “ ventris tumore teneatur æger, non ita prompte educun-
 “ tur

often beneficial by the Stimulus they give to the absorbing Vessels, provided the Head or Breathing is not too much affected during their Operation. Cathartics (*f*) repeated as often as the

“ tur aquæ per infusionem croci metallorum, ac in ascite
 “ grandiore ubi ingens aquarum copia ad gesta fuerit.” Sydenham de Hydrope.

(*f*) R. Pulv. rhubarb. drach. dimid. calomel. gr. vi. syrup. alb. q. s. ut fiat bolus.—vel R. Syr. de rhamn. fescunc.—vel R. Syr. de rhamn. unc. i. tinēt. jalap. drach. i. misce.—vel R. Pulv. jalap. scrup. i. calomel, gr. x. misce.—vel—R. Pulv. jalap. gr. xxv. sal. nitri gr. x. misce.—vel R. Gum. gambog. gr. xii. cremor. tartar. gr. viii. zinzib. gr. iv. syrup. alb. q. s. ut fiat bolus.—vel R. Pil. ex colocynth. semidrach. form. in pil. vi.—vel R. Succ. irid. nostrat. fescunc.—vel R. Tartar emetic gr. x solve in Aq. font. unc. x. & adde Syrup. Rosar. solut. unc. i. capiat. unc. ii. omni hora donec laxeture alvus.—Hæc omnia cathartica summo mane deglutienda.—Great Variety of Hydragogues have been strongly recommended by different Authors, the Elaterium, Decoctions of the inner Bark of the Elder, and, in short, almost all the strong Purges of the Materia Medica.

“ Id diligenter est observandum, (in Hydragogorum nem-
 “ pe usu) ut aquæ ea maxima celeritate exhauriantur, quam
 “ ægri vires ferre queant; utpote qui singulis diebus ex-
 “ purgari debeat; nisi quod, sive ob nimiam debilitatem
 “ corporis, sive propter præcedentis operationem plus satis

the Patient's Strength can bear, if they evacuate the Water, are extremely useful; but if they have not this Effect we ought not to persist in their Use, as they only exhaust the Strength, without forwarding the Cure; and *Sydenham* very justly observes, that they ought to be omitted where the Patient is of a very weakly Constitution, and with Women subject to the Vapours (g); nor can they well be

“ violentam, dies unus aut alter intercalari possit. Etenim
 “ si non nisi post longa intervalla repetatur purgatio, quan-
 “ tumlibet copiosa catharsis præcesserit, aquis denuo affa-
 “ tim colligendis ansam præbebimus; adde quod pericu-
 “ lum est, ne aquarum inter viscera mora diuturnior ea-
 “ dem putredine quadam sua inquinet, ac inficiat.—Ex re
 “ quoque erit at vesperam opiatum aliquod adhibere ad tur-
 “ bas à purgatione excitatas compescendas.” *Sydenham.*
Tractat. de Hydrope.

(g) “ Est autem, ubi medicamenta omnia, qualis cum-
 “ que demum generis, quæ alvum movent, prorsus omitti
 “ possint ac debeant, quoties enim æger constitutione est
 “ infirmiori, vel scemina vaporibus obnoxia, aquarum eva-
 “ cuatio diureticis solum committenda, inter quæ ea sunt
 effica-

be administered where the Ascites is attended with a Purging, which already weakens the Patient too much ; in all such Cases Diuretics and Diaphoretics must be mostly depended upon for removing the Disorder. Emetics and Cathartics given in small Doses, frequently repeated, prove sometimes more powerful Hydragogues than larger Doses of these Medicines taken at longer Intervals; for they carry off the Water not only by Stool, but by Urine likewise (*h*).—When Purgatives are given, Corroborants and Diuretics may be joined with

efficacissima, quæ ex salibus lixivialibus fiunt.” Sydenham.
Process. integ. de Hydrope.

(*h*) R. Oxymel. scillit. drach. i. fs. aq. cinnam. simp. unc. i. spirit. lavend. comp. syrup. e cortice aurant. singul. drach. i. misce. Capiat talem dosin omni quadrihorio.—vel R. Pil. e colocynth. sal. succin. singul. drach. dimid. syrup. scillit. q. s. ut fiant pil. xviii. capt. iii. bis die.—vel R. EleËt. e cassia drach. ix. pulv. rad. jalap. drach. i. ol. stillat. juniper scrup. i. syrup. zinzib. drach. iv. misce capt. scrup. ii. ter die.—vel R. EleËt. lenit. unc. ii. tartar. emetic. gr. xii. coque ex aq. fontan. unc. xvi ad unc. xii. cap. unc. ii. omni hora donec laxetur alvus & cietur vomitus.

them, and are always to be taken (i) in the Intervals. However, it ought to be observed that the same Diuretics will not answer in every Case, for often one will have a good Effect when another has had none; the lixivial Salts have cured Dropsies which yielded nothing to Squills and Calomel.—Small Doses of Calomel have carried off Water where these Salts had no Effect.—And Squills have answered (k), where neither of the other two made any
Im-

(i) R. *Vin. amar. lib. ii. capiat unc. ii. ter vel quater die.*
—vel R. *Pulv. cortic. Peruv. unc. ii. cort. aurant. unc. i. limatur mart. unc. dimid. syrup. e cortic. limon. q. s. ut fiat electuar.*
Capiat molem nucis moschat. mane & vesperi.———vel R. *Aq. menth. piper. unc. v. tinct. aromatic. vin. chalybeat singul. unc. i ss. Syrup. e cort. aurant. unc. i. misce. Capiat unc. i. horis medicis.*

(k) Dr. Savary, Physician to his Majesty of France's Marine Department at *Brest*, in the Year 1760, translated this Essay into the *French* Language. In a Note to this Chapter on the *Ascites* he very justly observes, that every judicious Physician, when he finds one Class of Medicines fail will try another. He says he has cured several Dropsies

Impression on the Disorder; and therefore where one Diuretic fails, another ought to be tried (1); and the same may be said of Dia-

fies by an Infusion of Juniper Berries in white Wine, which he mixed with an equal Quantity of nitrated Water, and gave three Glafs-full's in the Day; and continued its Use for a considerable Time, adding from Time to Time five or six Grains of the Powder of Squills.

He observes that the Effect of this Medicine is much surer in œdematous and anasarcaous Cases than in the Ascites, especially where the Disease is confirmed, and the Water has been already drawn off by tapping; tho' he says that it will often be of Use in such Cases, and mentions three Patients whom he cured with it after the Operation of the Paracenthesis had been performed once or twice in each.—The first Patient was a Lad between 15 and 16 Years of Age, whose Belly was of a monstrous Size, and whose Veins were so much swelled that he seemed ready to suffocate; after a large Quantity of Water was drawn off by tapping, the Wound continued to discharge for a Fortnight; the Belly was fomented with discutient Decoctions, proper Bandages and Compresses were applied; and the Patient took the above-mentioned Infusion of Juniper Berries with the Powder of Squills, which increased his Discharge by Urine, and he recovered his Health and Strength daily.

phore-

phoretics, which have often done great Service (*m*).

134. When

(1) In the Notes to Sect. 43. we mentioned several dropfical Cafes which were cured by bringing out Sweats.

R. *Pulv. anodyn. Doveri*, *unc. dimid. capiat a gr. x. ad scrupul. ii. h. s*; *adde pro re nata sal vol. ammoniac. gr. x.*—
—*vel R. Sal volat. c. cervi*, *gr. x. opii gr. ii. mithridat. scrup. i. m*, *fiat bolus sumendus cum æger in lectum se receperit.*—*vel R. Vin. antimonial. drachm i. Tinct. Thebaic. scrup. i. misce, capiat sudori accinctus.*—*vel R. Theriac andromach. drachm. dimid. capiat in lecto, superbibendo aq. hordeat. calid. lib. i. acidulat. cum spirit. vitriol. fort. gutt. xx. syrup limon. unc. i.*—*vel R. Sal ammoniac. vegetabil. scrup. ii. solve in seri vinos. tepid. unc. viii. & repet. omni dimidia hora ad duas vel tres vices, ut eliciatur sudor.* See other Formulæ of this Kind in Notes to Sect. 72. c.

Tho' vegetable ammoniacal Salts have long been used in a liquid Form, yet it has been alledged by *Macquer* and other Chymists, that a solid vegetable ammoniacal Salt, made by the Mixture of the vegetable Acid and the volatile Alkali, was difficult to be prepared; but a beautiful chrystallised neutral Salt may be easily obtained by saturating a Solution of the volatile Sal Ammoniac, with the Chrystals of Tartar, and then evaporating the Liquor with a slow Fire till it come to the Consistence of a Syrup, and letting it stand for some Days in a cool Place; and it is this Salt which I have here called *Sal vegetabilis ammoniacus*.

134. When the Belly is much distended with Water, the Patient is not only afflicted with

(m) *Mary Nevil*, a Woman 48 Years of Age, was admitted into *St. George's Hospital*, the 29th of *August* 1759, for an *Ascites* which had began in *November* 1758. Her Belly was large, she had a perpetual Drought, a Difficulty of Breathing, could not sleep at Night, and made but very little Water, and that of a high Colour; she was ordered the saline Draughts four Times in the Day; an Anodyne Draught with a Scruple of the *Lixivium Tartari* every Night at Bed-Time, and a Dose of *Jalap* and *Nitre* twice a Week. By continuing this Course she made Water freely, and the Swellings diminished daily. She was discharged, seemingly in good Health, the 10th of *October*. I never saw the Woman since, but have been told that she continued well for five or six Months, when, catching a fresh Cold, her Disorder returned, and she died.

Dorothy Perry, a middle-aged Woman, was admitted into *St. George's Hospital*, the 24th of *October* 1759, for an *Ascites* and anasarcaous Swellings of the Legs, which came after a Fever; she was ordered ten Grains of the *Squill Pills* in a saline Draught, Morning and Evening, and a Dose of *Jalap* and *Nitre* twice a Week, which removed her dropical Complaints in a Month's Time, at the End of which she was seized with a *Pleurisy*, which was cured
by

with a Difficulty of Breathing and Coughing,
occasioned by the Compression of the Dia-
phragm,

by Bleeding and the antiphlogistic Medicines, and she was dismissed, seemingly in good Health, the 5th of *December*.

Margaret Gibson, a middle-aged Woman, was admitted into *St. George's Hospital*, the 28th of *March* 1764, for an Ascites attended with anasarçous Swellings of the Legs, which had come about a Month before from catching Cold; at first she had the Squill Pills Morning and Evening, and Physic twice a Week; but these having no Effect on her Disorder, she was ordered half a Drachm of the Lixivium Tartari in a Draught three times a Day in place of the Squill Pills; but after continuing this Course for a Fortnight longer without any Change in her Disorder, on the 27th of *April* she was ordered to lay aside all her former Medicines, and to take two Drachms of the Chrystals of Tartar dissolved in Water in the Day; on the 30th she complained of being costive, and was ordered half an Ounce of the *Sal catharticum amarum*, and two Drachms of Manna, to be dissolved in six Ounces of Almond and Emulsion, to be taken occasionally; in about four Days after this she began to make Water freely, her Swellings decreased daily, and she was discharged, seemingly in good Health, the 8th of *June*.

* * A Physician of Eminence, whose Veracity may be entirely relied on, told me that an Aid-de-Camp of the late
Marshal

phragm, which prevents the free Passage of the Blood thro' the Lungs; but the Absorption of the

Marſhal *Saxe* had aſſured him, that the Marſhal had been twice tapped for a Dropſy in the Year 1745, and had been cured by the following Medicine : Take three large Handfulls of Broom-Aſhes burnt in a ſmothered Fire, boil them in four *Engliſh* Pints of *French* white Wine to two, and ſtrain it for Uſe. This whole Quantity was drunk every Morning for ſome Time, and brought away a large Quantity of Water by Urine, and with it a great deal of Slime mixed with Water.

* * * The ſame Gentleman, gave me the following Account :—In *July* 1756, a Dragoon of the 10th Regiment, after drinking cold ſmall Beer when very hot, became dropſical ; he was tapped, but only a ſmall Quantity of Water came away. He began to ſwell again, when the Surgeon of the Regiment gave him 15 Grains of Quickſilver, killed in Balfam of Sulphur, every Night at Bed-Time, and twelve Grains of Rhubarb next Day. Theſe Medicines kept his Belly open, proved ſtrongly diuretic, and removed all his dropſical Complaints. He lived in good Health for three Years after, but then relapſed and died.

See Examples of the Effects of theſe different Clafſes of Medicines in Notes to Indication I. and II. of Part I.

the dropfical Water (the only Cure of this Dif-eafe) is extremely diminished, or ceafes entirely. On thefe Accounts it is neceffary to let out the Water by Tapping, tho' few who have undergone the Operation have obtained a complete and lafting Cure, but have been fubject to Relapfes (*n*).

135. The Place to be chofen for the Paracenthesis or Tapping is the middle Point between the Navel and the upper anterior Spinal Procefs of the Os Ilium, where there is neither too great Thicknefs of the containing Parts, nor any Tendon, large Veffel, or Nerve, in Hazard of being wounded, and the Water can eafily run off (*o*).—If a fmall Incifion thro' the

(*n*) “ Deinde, ut inde cæperit, tamen aqua nifi emittitur,
 “ quæ contra naturam ibi fubftitit, & jocinori & cœteris
 “ interioribus partibus nocet. Convenitque corpus nihilo-
 “ minus effe curandum. Neque enim sanat emiffus humor,
 “ fed medicinæ locum facit, quem intus inclufus impedit.”
Celf. lib. iii. cap. 21.

Skin

Skin is first made with a Lancet, where the Perforation is intended to be made with the Trocar, the Instrument pierces with much less Force than is otherwise required; and this ought always to be done previous to the Operation when there is but little Water in the Belly, in order that the Danger of hurting any of the Viscera may be avoided.

136. The Ancients observing, that Patients who were tapped were liable to fall into fainting Fits, and even to the Hazard of Life itself, when much Water was let out at once, imagined these Symptoms were owing to the animal Spirits flowing out with the Water, and therefore drew it

(o) The common Directions of Tapping four or five Inches below the Navel, and as much to one Side, become very precarious, and of consequence often dangerous when the Belly is distended with Water; since a Point thus described must vary according to the different Degrees of Distension of the Belly.—See these Reasons more fully explained, the necessary Directions about the Manner of performing the Operation, and the Description of a Belt proper to be used, in *Med. Essays*, vol. i. art 18.

off

off at different Times (*p*), that too much might not be wasted at once; but Dr. *Mead* fully (*q*) demonstrated in 1705, that these Appearances depended entirely on the Pressure made by the Water on the surrounding Parts being too suddenly removed; and proper Bandages have been since contrived to remedy this Inconvenience. For by these Means the same Pressure can be kept on the Belly, during and after tapping, as before the Operation: in determining which, the greater or less Difficulty of Breathing serves as a sure Criterion (*r*). The
general

(*p*) “ Per hanc (nempe fistulam) effundendus humor est: “ atque ubi major pars ejus evocata est, claudenda demisso “ linteolo fistula est; & in vulnere, si id uestum non est, re- “ linquenda. Deinde per insequentes dies circa singulas “ heminas emittendum, donec nullum aquæ vestigium ap- “ pareat.” *Celsi lib. vii. cap. xv.*

(*q*) See *Mead. monit. med. cap. viii.*

(*r*) I have more than once seen the bad Consequence of not observing this Precaution of keeping a proper Compression on the Abdomen in the Time the Water is letting out,
by

general Practice now is to let out all the Water at once ; by which there is less Danger, than by the old Method of Gangrene in the Orifice made in the Teguments ; or of a Tympany, by Want of Compression on the Intestines ; or of the remaining Water macerating the Bowels, or becoming acrid, and eroding them by the Admission of Air into the Cavity of the Abdomen.

If the Matter contained in the Abdomen is either too thick to flow through the Cannula of a Trocar, or if Hydatides be mixed with the Water (*s*), the Orifice is to be enlarged by
an

by the Patient's falling into a fainting Fit ; and afterwards, when the Water has been again collected and let out, it has been tinged with Blood, owing to the want of proper Compression at the former Tapping.

(*s*) See the Case of a middle-aged Man, who was tapped for a Dropsy of the Belly, but the Liquor being too thick to pass through the Cannula of a Trocar, an Incision was made into the Abdomen, through which, in two Days,
P
twelve

an Incision wide enough to let out the extravasated Liquors. Or if the Abdomen happens at any Time to be preternaturally divided into two Cavities by the Concretion of any of the Viscera to the Peritoneum (*t*), and both are full of Water, both must be tapped.

137. In order to prevent the Return of the Dropsy after tapping, it has been proposed to inject some astringent Liquor into the Cavity through the Cannula immediately after the Wa-

twelve *German* Measures of a thick gelatinous Liquor, mixed with a Number of Hydatides, some as big as a Hen's Egg, some no bigger than an Ant's, were evacuated. *Philosoph. Transf.* No. 370. *sect.* 4.

(*t*) See such a Case in the *Medical Essays*, vol. iv. art. 30. where the upper Part of the Omentum had grown all round to the Peritoneum, and thereby formed two Cavities in the Abdomen; from the upper one of which the Water was not voided when it was let out of the lower one by tapping.

ter

ter is all let out (*u*) ; or to cause such a Liquor to enter by one Pipe of a double Trocar, while the Water is running out at the other (*w*) ; but there have not yet been suffici-

(*u*) Mr. *Christopher Warwick*, Surgeon at *Truro*, relates the Case of a Woman (*Jane Roman*) into whose Abdomen he injected a large Quantity of Liquor made with two-thirds of Claret and one of *Bristol Water* mixed together, after extracting by the common Operation of the Paracentesis thirty six Pounds of a greenish transparent Lymph : and a Relapse was prevented by these Means. When a large Quantity of the Injection was in her Belly, a pungent Pain possessed her Breast, frequently darting through all the Viscera, her Breathing became extremely difficult, her Pulse faltered, she fell into Syncope, and became speechless. *Philosoph. Transf.* No. 472. *sect.* 3.—*Brunner* proposed that Tincture of Myrrh and Aloes, with camphorated Spirit of Wine, should be injected into the Belly, to prevent the Return of the Ascites. *Misc. Cur. a. n. c. dec. 2. ann. 8. schol. ad obs.* 100. But this would surely be too acrid, as we may judge from the Effects just now related of a much milder Liquor, the Claret and *Bristol Water*, and from the violent Inflammation which Spirits thrown into the Scrotum raised.

(*w*). This is the Proposal of the ingenious Dr. *Hale*. *Philos. Transf.* No. 472. *sect.* 4.

ent Trials made for determining how far this Method may be depended upon.

138. After the Water is drawn off by tapping, the Stomach and Intestines, having less Assistance than formerly from the Muscles of the Belly, which do not immediately recover their Tone so as to press with sufficient Force on those Bowels, generally are inflated, and the Patient is affected with Anxiety, Gripes or Spasms. When these Symptoms come on after tapping, or after the Operation of Emetics or Purgatives, the most effectual Remedy is an Anodyne, which under these Circumstances generally becomes a powerful Diuretic (α).

(α) R. *Aq. menth. piperit. simp. unc. i. cinnamon spir. unc. dimid. tinct. castor. drach. i. tinct. thebaic. gutt. xi. tartar. lixiv. scrup i. syrup. alth. drach. i. misce pro haustu vespertino.*
vel R. aq. menth. simp. unc. i. menth. piperit. spir. unc. dimid. tinct. thebaic. gutt xl. vin. antimon. gutt. l. syrup. ex. althe. drach ii. cap. h. s.

139. When

139. When the Disorder has originally begun with anasarcaous Swellings, and the Ascites is complicated with the Anasarca, sometimes Scarifications or Punctures made in the lower Extremities will serve to evacuate the Water (*y*) from the Abdomen ; for when the Water of the cellular Membranes which compressed the absorbent Veins of the Peritoneum, and prevented them from performing their Office, is discharged, then these Vessels, if in a sound State, soon take up the extravasated Fluids lodged in the Cavity of the Abdomen.

140. After the Water is evacuated, the Patient must persist in the Use of those Medi-

(*y*) See a remarkable Instance of the Cure of an universal Dropsy effected by Scarifications and Punctures, and the Use of the laxative mercurial Pills and Diuretics after the Operation. *Edin. Physic. & Literar. Essays*, vol. ii. Art. 32. and several Instances of the same Kind in *La Motte's Traité de Chirurg. complete*, tom. ii. observ. 119, and in other Authors.

cines which promote the natural Secretions, and carry off the hydropic Water, for there is always Danger of a fresh Collection being formed (z).

141. If

(z) *Van Sweiten* mentions a Case from the *Mem. de l'Acad. des Sciences*, 1703, p. 175, of a Girl twenty Years of Age, who had an Ascites for three Years; she was tapped three Times, and between four and five Pints of a slimy black Water drawn off each Time. After the third tapping she was ordered a Decoction of *Urtica*, *Iris*, and the *Acetosa rotund. foli.* which proved a strong Diuretic, and half the Water she made was slimy and black, resembling what had been brought away by tapping. She recovered her Health, was married, and had Children.—A Woman thirty-six Years of Age, ill of an Ascites, which had come from a watery Tumor of the Abdomen bursting into its Cavity, was thrice tapped, and from the last Time the Operation was performed she began to recover, and in some Time brought forth a healthy Child. By computing from the Birth of the Child, it appeared that she was three Months gone in her Pregnancy before the Paracentesis was first performed, of which she had no Suspicion herself. See *Edin. Medic. Essays*, vol. vi. art. 64.—

A Lady

141. If the Obstructions should be removed, the Corroborants and other Remedies formerly mentioned in Sect. 51. should be employed to strengthen the Patient, and prevent a Relapse.

142. In People who have the Ascites, and at the same Time are afflicted with the true Hernia, the Water commonly makes its Way into the Hernial Sac, to form either a Hydrocele or Hydromphalus, according to where the Hernia is ; and frequently where there is

A Lady, fifty Years of Age, labouring under an Ascites, for which she had been thrice tapped, and taken many purgative and diuretic Medicines without Effect, was advised to take every Morning and Evening a Spoonful of unbruised Mustard Seed, and to drink after it a Pint of a Decoction made of the Tops of Broom. In three Days she was sensibly relieved, the Medicine purged her sometimes for two or three Days, and made her pass, at least, between two and three Quarts of Urine every Day. She persisted in the Use of these Medicines, and was cured without a Relapse. *Mead. Monit. medic. cap. viii.*

no Hernia the Pressure of the Water in the Abdomen occasions anasarcaous Swellings of the Scrotum in Men, and at other Times the Water in the Belly distends the Navel (especially of Women) into a watery Tumor.

143. These Appendages of the Ascites (if they may be so called), when they have a Communication with the Water in the Abdomen, may be emptied either by, 1st, Tapping the Belly in the common Part, or, 2dly, by making a Puncture with a Lancet or a Trocar in the most depending Part of the Tumor, when the same (a) Precautions are to be observed as after the common Operation of the Paracente-

(a) *Riverius* gives a Case of an Ascites accompanied with the Hydromphalus, where the Patient was cured by letting out the Water at the prominent Navel. *Obs. commun. a Formio, obs. iv.*—A like Case is related by *Du Verney Mem. de l' Acad. des Sciences, 1702.*—See a Number of Cases of the Hydromphalus in *Bonetus* and *Schenkius*, and of Cures said to follow the bursting of the Navel. *Mead. Monit. Med. cap. 8. Medic. Essays, vol. iii. Art. 28. Mem. de l' Acad. des Sciences, 1723, p. 583.*

sis,

sis, with this Addition, that a Gangrene is here more to be apprehended by the sudden collapsing of the Teguments, and therefore the Corroborants prescribed in Sect. 72. *a.* ought to be diligently made Use of. Sometimes the Skin of the Navel or Groin is burst by the distending Water ; in which Cases it is to be treated as if an Incision had been made.

144. The Hydrops Ascites Siccus, or Tympany, accompanying the Ascites, is no other than what was mentioned in Sect. 130. Note *y.* And when it is seen without a Dropsy, is not a Disease caused by Water, and therefore no Part of my present Subject (*b*).

DROPSY

(*b*) Mr. *Littre*, in the *Memoirs of the Academy of Sciences at Paris, for the Year 1713*, affirms that the Air in this Disorder, the Tympany, is always confined within the Cavity of the Intestines, and is never lodged within the Cavity of the Abdomen ; and hence, although the true
Tympany

DROPSY between the TUNICA VAGINALIS and TESTIS.

145. Water collected between the Vaginal
and proper Coat of the Testicle, hinders the
Testicle

Tympany is so often mentioned by the Antients, and we have several Cases of it related by the Moderns, some Practitioners have begun to doubt of its Existence. The following Case is a Proof that it is sometimes to be met with. On the 12th of *March* 1757, I was desired to be present at the Opening of the Body of a Woman (Mrs. *Miller*) in *Swallow Street*, who had died about fourteen Days after Child-birth. The Abdomen was swelled as much as if she had been in the last Month of her Pregnancy, and felt as if it was filled with Air. A long Incision was made with Care through the Skin and Muscles quite to the Peritoneum, and then a small Puncture was made through it on the left Side of the Navel; immediately such a vast Quantity of fetid Air rushed out through the Orifice, as obliged us to open all the Windows of the Room in which the Corpse lay, and the Swelling of the Belly subsided entirely. The Blade of a Pair of Scissars was then put into the Puncture, and the Integuments being

Testicle from being felt, by which Circumstance this Kind of internal Hydrocele is distinguished from the others.

146. When

ing raised up from the Intestines, one Incision was made down to the Pubis, and another up to the Cartilago Eniformis. The Operator finding the Integuments every where free from the Intestines on the left Side, made a cross Incision from the Navel down towards the Quadratus Muscle of the Loins. Having now a full View of the Cavity of the Abdomen, the Intestines appeared to be of the common Size, and not at all distended with Air more than common. On the left Side they had here and there a little Redness on their Surface, but otherwise seemed to be in a natural Condition; in the right Side they were more inflamed, and adhered to the Peritoneum almost every where between the Ribs and Spine of the Ileum.

We then turned over the Intestines very carefully, and examined whether we could find any Hole in them, or Fæces in the Cavity of the Abdomen; but we could discover neither. In the Pelvis there was about three Pints of a clear green-coloured fetid Water. A small Quantity of well-concocted, but fetid Pus lay below the Sac of the Colon, and on the Mesentery, below some of the Folds of the Ileum near it;—the Bladder was much inflamed;—the Uterus seemed to be quite sound, and was near
twice

146. When this Disease is recent, especially in young Patients, it is sometimes cured by the aromatic

twice the Size of the Uterus Virgineus of an Adult. The Spleen and Kidnies were in a natural State, the Liver had a slight Degree of Redness on its lower Part.

After we had examined every Thing we could without making Use of the Knife, an Attempt was made to dissect the Intestines from the Peritoneum at the Part where they adhered, and a Number of Collections of Matter were observed, some on the Outside of the Peritoneum, and others between the Peritoneum and Intestines. Very soon the Operator either cut or tore the Coats of some Part of the Intestines, and the Cavity of the Abdomen was overflowed with liquid Fæces, which put a Stop to our further Enquiries.

Upon examining into the History of this Woman, her Mother told us that she never had had any acute Inflammation of her right Side, but that for some Months of her Pregnancy she had complained of Stitches and Pains of that Side, attended with Sickness; that the second or third Day after her Delivery, she was very feverish and sick, and had swelled in about twenty-four Hours to that monstrous Size we had seen her of.

Was this a true Tympany, arising from some very small Hole of the Intestines, which allowed the Air but not the
Fæces

aromatic Fumes, and such like ; Formulæ of which were set down in Notes to Sect. 72. *a*. Other discutient penetrating Medicines (*c*) have sometimes a like good Effect. During their Use the Scrotum must be always well suspended by a proper Bandage, and repeated Doses of Purgatives should be given.

147. If these do not succeed, a Puncture may be made into the hydropic Sac with a Lancet to evacuate the Water. Surgeons commonly do this with a Trocar ; but it is not so good an Instrument as the Lancet, especially when the Quantity of hydropic Water is small ; for there is a greater Risk of wounding the Testicle with

Fæces to pass ? Or, was the Air generated in the Cavity of the Abdomen by putrid Humours ? The first seems to me to be the most probable Conjecture.

(*c*) R. *Rad. bryon. alb. unc. ii. fol. cicut. vulg. recent. manip. ii. misce, et coque in q. s. aq. font. ut fiat s. a. cataplasma. cui adde gum ammon. in acet. fort. solut. unc. ss. ol. palmæ drach. iii.*

a Tro-

a Trocar than with the Lancet (*d*). As the Water may be expected soon to collect again, this Method is called the Imperfect or Palliative.

148. After tapping, the Methods of injecting strengthening Liquors (*e*), or of exciting Inflammation by the Introduction of extraneous

ous

(*d*) See in *Med. Essays*, Vol. v. Art. 22. a Case where a violent Inflammation and Suppuration of the Testicle was probably caused by the Point of a Trocar hurting the Testicle.

(*e*) Dr. G. *Monro*, taking the Hint from the Method proposed by my Father of curing the Hydrocele by raising a small Degree of Inflammation, attempted to make a radical Cure in the following Manner: having let out the Water of a large Hydrocele that had been often tapped, he injected a little Spirit of Wine into the Scrotum, which raised so violent an Inflammation as to bring the Patient into great Danger; but by bleeding the Patient pretty freely, he was at length relieved. He recovered, and has never since had a Return of the Hydrocele. This violent Inflammation, which the ardent Spirits brought on in this Patient, induced him to try a milder Remedy in the next Case that offered; when

ous Bodies (*f*), may sometimes be put in Practice, in order to prevent a Return; tho' the Operation to be mentioned in the next Section is in general to be preferred.

149. To make a radical Cure, it is necessary to open the Tumor by a large Incision, to cut away Part of the Integuments and Cyst, taking particular Care that the Testicle do not start out at the Orifice, but be retained within the Scrotum (*g*). If an Hæmorrhage ensues,
the

when having let out the Water, he injected some Claret into the Scrotum, by which Means only a slight Degree of Inflammation was raised; but it succeeded to his Wish by completing a Cure: since which Time he has made several radical Cures by this Remedy alone.—Mr. *Sharp* had the same violent Degree of Inflammation follow the Injection of Spirit of Wine. *Operat. Chap. ix. Case 4.*

(*f*) In *Med. Essays, Vol. v. Art. 22.* a Proposal is made of exciting Inflammation, after tapping for Water surrounding the Testicle, by letting the Cannula remain sometime within the vaginal Coat to rub on the Testicle.

(*g*) I have more than once seen the Testicle remain out of the Cavity of the Scrotum after this Operation till it
was

the proper Means for stopping it are to be employed (*h*) ; after this it is to be treated as a
common

was covered with Flesh, and then with a new Skin. *Hildanus* gives a Case of an Ascites where the Scrotum swelled prodigiously, and then gangrened and sloughed off, so that the Testicles were left quite bare and exposed ; all the hydropic Water was evacuated this Way, granulated Flesh arose from the Testicles, and a Callus over that, which served by way of a Scrotum : the Patient was quite cured of his Dropsy, and afterwards had several Children. *Obs. Cent. i. Obs. 48.*

(*h*) Mr. *Jameson* having made a small Perforation, with a dissecting Scalpel, into the Scrotum of a Person, in order to evacuate the Water of an Hydrocele, about twelve Ounces of pure Blood ran out of the Orifice after the Water was evacuated, without any Pain or Uneasiness. Next Day the Patient perceived a great Weight and Fulness of that Testicle : an Incision was then made into the Tunica Vaginalis, and a great Quantity of thick coagulated Blood was discharged ; the Wound was properly dressed, and the Cure went on without any other Accident ; for in three Weeks Time the Tunica Vaginalis grew so firmly to the Testicle, that the Patient never had a Return of his Hydrocele. *Med. Essays, Vol. ii. Art. 14.*—See two other Cases

common Wound. An Inflammation generally follows, and either a great Part of the Cyst sloughs off, or granulating Flesh arising from its Surface, its Sides grow together, and a Cure is compleated.

150. But if neither of these happen, and the outer Edges of the cut Cyst are likely to concrete so as to leave a Cavity within, the Cyst may be so much irritated as to excite an Inflammation, without which a Cure cannot be made, as the Sac otherwise continues to furnish a constant Supply of Water, which produces a Fistula, or else the Orifice shuts up, and the Hydrocele is soon formed again. The Irritation must, however, be made very cautiously; for it is often followed by violent Inflammation and Fever (*i*). When Pus is discharged from

Cases of Hæmorrhages after this Operation in Mr. *Sharp's* Operat. Chap. ix.

(*i*) See Cases of Cures of Hydroceles performed by raising Inflammation in Notes to Section 164. and in *Medical Essays*, Vol. v. Art. 22. and the Additions at the End of

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that

from the Cavity, there are Hopes of a Cure ; for then granulated Flesh arises from the Cyft to fill it up, or to make its Sides grow together.

151. Of late it has been proposed to perform the radical Cure, by cutting away the greater Part of the Tunica Vaginalis, and then to treat it as a common Wound (*k*).

PRETER-

that Volume.—The first three Patients on whom Mr. *Sharp* performed the Operation of laying open the vaginal Coat of the Testicle in the Hydrocele, were in great Danger from the Fever and Inflammation which came on after it. *Operat. Chap. ix.*

(*k*) Since the first Edition of this Essay, the late Mr. *Douglass* published a Treatise on the Hydrocele, in which the cutting away the greater Part of the Tunica Vaginalis, in the following Manner, is recommended as the safest and best Method of making a radical Cure.

Having laid the Patient in a proper Posture, an oval Piece of the Skin is to be taken away, beginning a little above the upper Part of the Tumor down to the Bottom, the widest Part of the Incision being almost equal to the widest

Part

Preternatural Hydropic Cyfts.

152. The preternatural Cyfts formed by watery Collections, were, in their found State, all of

Part of the Tumor ; then the Cyft is to be opened by a small Incision, and to be dilated its whole Extent with a Pair of probe pointed Sciffars. After this the Testicle is to be carefully supported by an Assistant, while the Operator separates the Cyft every where from the Skin, and then cuts it close to the Margin of the Testicle and spermatic Cord. In doing this, too much of the Cyft should not be taken up at once, as it is scarce possible to pare it off so as not to leave some behind, which by all Means should be avoided. The other Side is to be cut away in the same Manner, until all the Cyft, excepting what covers the spermatic Cord, is entirely removed. This done, the Testicle is to be replaced, the Cavity filled up with dry Lint, and a thin Pledget of Tow spread with digestive put over it ; and the whole Scrotum to be covered with an emollient Cataplasme, and secured with a proper Bandage.

of them Spaces between the cellular Membranes. For when the Passages from one, two, or more of them into the neighbouring Cells are stopped, their Sides being distended, the Membranes of the several surrounding Cells are

The Advantages which Mr. *Douglafs* alledges that this Method of operating has, are ; that by removing the Sac the great Inflammation, Pain, and symptomatic Fever, which, he says, attend the common radical Cure till such Time as the Cyst sloughs off and separates, are prevented ; that a good Suppuration soon ensues without any violent Symptoms ; and that a Cure is completed without any Danger of a Relapse. See his *Treatise on the Hydrocele*, Chap. iv.

Whether this Method has really such Advantages over the common radical Cure, the future Experience of Surgeons must determine.

This Method of Cure is as old as *Celsus's* Time, and has been proposed in some Cases by some late Writers, as Mr. *Douglafs* observes :

“ Si scrotum, & sub hoc protinus vitium est, nihil aliud
 “ quam humor est effundendus, abscindendæque membra-
 “ næ sunt, si quæ eum continuerunt ; deinde eluendum id
 “ ex aqua, quæ vel salem adjectum vel nitrum habeat : si
 “ sub media, imave tunica, totæ hæ extra scrotum collo-
 “ candæ excidendæque sunt.” *Cels. lib. vii. cap. 21.*

brought

brought and pressed together, so as to form a firm membranous Sac; the more such a Sac is distended, the more Membranes are compacted together; and the longer they continue in this State, the greater Thickness and Firmness do they acquire. This is the Reason why the Cysts of such Sorts of Tumors are generally thick in Proportion to their Size and Continuance.

153. What is here said concerning the Formation of the Hydatides, or Vesicles full of Water, will, I believe, be granted in relation to the thick firm ones placed under the Skin; but different Opinions have been formed about those that are often seen upon the Bowels, or found floating in Liquors within them.

154. Some have imagined these Bodies to be distended lymphatic Vessels; but there has been no Case yet mentioned where they fol-

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lowed.

lowed the known Course of the Lymphatics, nor any similar Instance produced of any other Vessel in the Body being capable of so great Distention. I have seen Hydatides in the Abdomen larger than a common Orange, which is equal in Size to the largest Aneurism of the Aorta, where there was no Rupture of the Vessel, though the Aorta is at least three hundred Times bigger than the largest Lymphatic, and its Coats proportionally strong and able to bear the great Distention. Join to this the Instances of a Number of Hydatides being found floating in Hydropic Waters, *Houston Philos. Translat.* No. 381. *sect.* 3. *Ruyfch. observ. anat. chirurg. observ.* 65. *Smelly's Cases, Collection* 8. *p.* 99. of larger Vesicles containing lesser ones, and a Number of those again contained in one large Sac, *Act. Petropol. tom.* 1. *p.* 379. the Want of a due Force to separate these supposed distended Vessels from their Attachments; and we shall readily be convinced that

that Hydatides are not distended lymphatic Vessels.

155. *Ruyfch's* Opinion of Blood-Vessels degenerating into Hydatides, is what I can form no Idea of; although I can easily see how Hydatides, when once formed, should by their Pressure on the neighbouring Vessels prevent Liquors from passing through them, and how, if this Pressure continue long, their Sides may grow together, and the Vessels become impervious. See *Ruyfch. advers. anat. dec. 2. p. 24.* and *Thef. 1. a. 2. 1. n. 12.*

156. Others have imagined that the Coats of these Hydatides were formed by the Particles of viscid extravasated Liquors attracting one another, and forming themselves into Pellicles round the hydropic Waters. It cannot be denied that such viscid Liquors are capable of being formed into Membranes; but the Difficulty is to conceive how such a Pellicle should

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form

form itself without any Attachment to the neighbouring Parts, unless we suppose them first to attach themselves to the Sides of the Cavity, and afterwards to be separated by the Liquors thrown out by the Mouths of the exhaling Arteries (*l*).

157. Others have been of Opinion, that all those Vesicles or Sacs are formed in the cellular Membranes in the same Manner as we have accounted for them in Sect 152. and either remain fixed to the Part where they originally grew, or are afterwards separated from their Attachments. The immense Distensibility of the cellular Membrane, the easy Separation of its Parts, its evident Formation into Sacs in all incysted Tumors, and its Membranes not

(*l*) I once saw a large loose Hydatide, whose Coats seemed quite inorganic, and were made up of different Layers laid one above another, which from their Appearance I suspected to have been formed of inspissated viscid extravasated Liquors.

hav-

having ramifying Vessels proper to them, leave no Doubt but that this is the Case with those Hydatides that are found attached to any of the Viscera, or any other Part of the Body. Nor is the Objection of their Pellicles melting down into a Liquor, conclusive against this Hypothesis; for we see the cellular Membranes every Day melted down in Suppurations; and if *Haller's* and *Kaaw's* Account of these Membranes, being originally a glewy Matter, be true, we shall be the less surpris'd at seeing them melt down in milder Liquors.

158. By this melting down of the cellular Membranes we may account for those Hydatides that are found floating in Liquors; for if Hydatides are once formed any where in the Body, a consequent Suppuration may detach them by dissolving the neighbouring cellular Membranes; nay, acrid, corroding, macerating Waters may easily produce the same Effect; and in almost all the Observations concerning

cerning loose Hydatides, we find that either there has been a Suppuration, or the hydropic Waters have been very acrid. Indeed in some Accounts of Hydatides in the Uterus, we do not find it said that either the Waters were acrid, or that there was any Suppuration; but might not these Hydatides have been originally the Cells of a Placenta, which after being separated had lain in the Uterus, and fallen to Pieces by long Maceration in the Waters. The Observations given by *Ruyfch* of Placentæ composed of such Hydatides, and those of *Mauriceau* shewing that a Hydrops Uteri is often complicated with Pregnancy, make this Conjecture not improbable.

159. It has been thought difficult on this Theory to give a Reason why these Hydatides seem sometimes quite inorganic, and to have no Vessels at all, while at other Times Vessels are seen distributed regularly through their Coats: but I think

think the Consideration of the Structure of the cellular Membrane, together with the Manner in which we have alledged these Hydatides to be formed, may account for these Apperances. For when only a few Membranes are distended, where no Vessels, so large as to be discerned by the Eye, run in their Interstices, there no Vessels can be seen; but where a Number of Membranes, that have considerable Vessels running between them, are pressed together, there an organic Structure must plainly appear.

160. The Vessels of the preternatural fixed Cysts being constantly distended by the inclosed Liquor have very little Power of Absorption, and what they do imbibe consists only of the thinnest Parts of the Fluids, on which Account what remains becomes sometimes of a thicker and more viscid Consistence.

161. Most of the hydropic Cysts near the Surface of the Body are called Hydatides; such
as

as are formed near the Tendons are commonly named Ganglions ; those placed on the Trachea have the Name of Bronchocele (*m*) ; and those that are near to the Glans Penis are known by the Name of ChrySTALLINES ; but none of them have any thing peculiar except their Situation. Nor does the Nature of the internal Hydatides differ from that of the external, tho' they have different Names applied to them, according to the Organs in or upon which they are situated.

162 But as, on account of the various Situation of Hydatides, there are different Remarks to be made concerning the Symptoms and Method

(*m*) The watery Bronchocele does not occur so often in this Country as in some others ; it is said to be a very common Disease among the *Swiss*, and other Inhabitants of the Alps. English *Translation of Boerhaave's Aphor. Note to Sect. 1221.*—Some Years ago Mr. *Bromfield* extirpated a large watery Cyft, situated between the Sternomastoideus Muscle and the Trachea of a Woman, and the Wound healed kindly.

of

of treating many of them, it is necessary to consider each Sort separately.

163. Hydatides are what Surgeons call circumscribed Tumors, *i. e.* their Extent can be exactly determined; they yield to Pressure, but when it is removed they return to their former Shape; the Fingers moved alternately on them feel a Fluctuation of their Liquor, but when they are deep-seated this is generally very indistinct and obscure; they seldom are hurtful, except by the Pressure they make on the neighbouring Organs, which are thereby hindered in the regular Performance of their Functions. The Fluid within them having no Communication with the external Air, is not apt to become so acrid as to destroy the Bag in which it is contained, and being in itself inert and watery, the little of it that is absorbed communicates no bad Quality to the Mass of Blood.

164. Hy-

164. Hydatides are scarce ever removed by any internal Medicines or by mild external Applications: they have been sometimes discolled by strong Pressure or Friction, by the frequent Fall of Water from a considerable Height upon them, or by Epispastics (*n*) applied to the Teguments covering them; but the most certain Cure is by some of the following chirurgical Operations.

a. By extirpating the Cyft. In this Operation Surgeons commonly put themselves to much unnecessary Trouble, by endeavouring to preserve the Bag entire; for there is less to cut, and more Room for doing it, when after laying bare the external Surface of the Tumor, the Cyft is opened, and the Water let out. After taking the Cyft away in this Manner, the

(*n*) R. Acet. fort. calefact. q. s. eo madefacta spongia tumori imponatur.—R. femin. sinap. triti micæ panis ana p. æ acet opt. q. s. ut fiat sinapismus hydatidi applicandus.—R. emplast. commun. cum gummi emplast. vesicat. singul. drach. ii. liquecant simul leni igne, extend. ad alutam & tumori applica.

Wound

Wound is to be cured in the common Method (o).

g. If the Extirpation of the Cyst seems dangerous, because of its Situation in the Neighbourhood of large Arteries, Veins, Nerves, Tendons, &c. its external Part only may be cut away, or it may be opened by a large Incision; and the Growth of Flesh from its internal Surface be procured, either by numerous Incisions made on it, or by escharotic, eroding, or stimulating Applications, which, by exciting Inflammation, increase Suppuration, and thereby promote the Growth of Flesh to fill up the Cavity (p).

If

(o) *Boerhaave* saw a Bronchocele which reached from the Os Hyoides to the Acromion of the Scapula, cured by Extirpation. *Van Sweiten comment. in aphor. sect. 792.* Cases of Hydatides cured in this Way occur daily.

(p) The Sac of a Hydatide in the spermatic Chord being laid open, a large Quantity of Water was evacuated, and the Wound dressed with dry Lint; some Days after, as the Scrotum and Bottom of the Wound felt callous, red Precipitate

2. If neither of the above-mentioned Operations can be performed, or the Patient will not submit to them, a Puncture may be made in the Sac with a Lancet or Trocar, in order to let out the Liquor contained in it; but if the small Orifice heals, a Return of the Tumor may be soon expected by a new Supply of Water; for preventing which it is adviseable, 1. To preserve the Orifice open, that the Water may run out as fast as it collects, and by these Means the Sac will be at Liberty to contract itself, so as at last to

pitate was put into the Sac, and Caustic was applied to the external Wound, till all the Hardness was carried off, and a good Suppuration came on, when granulating Flesh arising the Wound soon healed, and the Patient recovered, and has been since, for several Years, without the least Symptom of a Hydrocele. *Medical Essays, Vol. v. Art. 22.*

—Another Hydrocele of the same Kind was cured by exciting an Inflammation by Means of a Pipe introduced into the Sac at an Orifice made with a Lancet. *Ibid. Fourth Edition, P. 254.*—*Schenkius* cured a long watery Tumor that hung down from a Girl's Throat by laying it open. *Obs. lib. iii. de hydrope, obs. v.*—A Bronchocele was cured by running a red-hot Iron into it. *Zodiac. med. Gall. ann. 2. Febr. obs. ii.*

leave

leave no Cavity at all, or but a very small one (*q*).
 —2. To inject some astringent Liquor that
 may contract the Orifices of the exhalant Ar-
 teries.—3. To introduce some hard (*r*) or sti-
 mulating

(*q*) An incysted Dropsy of the Abdomen was cured by
 making an Incision into it, and keeping the Orifice open
 for almost two Years, in which Time a Tumor which
 gave Rise to the Disease was melted down, and the Cyst quite
 filled up. *Memoir. de l'acad. de chirurgie, vol. ii. p. 442.*—
 Two watery Tumors of the Face cured by keeping the Ori-
 fice of each open. *Medic. Essays, vol. v. art. 30. hist. 2.*
 & 3.

(*r*) See several Examples of Hydroceles cured by raising
 Inflammation, in *Medical Essays, vol. vi. art. 22.*—The
 following Case I saw myself: A young Gentleman having
 the Sac of an Hydrocele, where the Water was collected
 between the Tunica Vaginalis and Testicle, laid open by
 Incision, the Wound seemed to heal very favourably, and
 was quite cicatrised in a Fortnight's Time, except a little
 Hole through which the Gentleman observed that some
 Water continued to ouze out, and putting a Probe into it,
 he found that there was likely to be a new Collection of

R

Water

mulating Substance into the Cyst, whereby an Inflammation may be raised, a Suppuration ensue, and the Growth of Flesh be promoted, either to fill up the Cavity, or to make its Sides grow together.

♂. Some Writers have proposed to put a Seton through the Sac, that the Water may run off continually through the Orifices (s) ; but the Event of this Method is very uncertain.

Another

Water formed ; upon which, without consulting any Person, he put a small Tent made of a twisted Waxed Thread into this Orifice, to prevent its shutting up entirely, and went immediately to Bed ; having slept some Hours he awaked with a very sharp Pain and Inflammation in the Testicle, which brought on a smart Fever that required very plentiful bleeding before it could be removed. This, however, was succeeded by a mild Suppuration, and a complete Cure was made, the Cavity soon filling up and healing firmly.

(s) We mentioned formerly two Examples where this Method was unsuccessfully put in Practice to draw off the
Water

e. Another Method recommended in former Days, was to burft the Cyft with the Stroke of a Mallet; but this cannot be done except when the Hydatide is fupported by a firm Bone; and at any Rate fuch an Operation bruises the Parts too much, for which Reafons it is now laid afide (*t*).

165. If by any of thefe Operations the Prefsure made on the furrrounding Parts by Hydatides be fuddenly taken away, and any of the bad Confequences mentioned in Sect. 48. are likely to enfue, we muft endeavour to prevent them by the Methods propofed in Sect. 49.

Water in the Afcites, from *Decker's Exercit. præct. circa purgantia*, p. 289.

(*t*) A Hydrocele cured by a Blow on the Scrotum againft the Saddle. *Med. Effays*, vol. v. art. 22.—We already mentioned a Dropsy of the Uterus being cured by a Bruife from a Fall. *Mifcel. curios. a. n. c. dec. 3. an. 5 & 6. obf. 57.*

BASTARD HYDROPTHALMIA.

166. Water collected in a Sac formed at the Fore Part of the Eye, either in the Tunica Adnata (*u*), or Cornea (*w*), hinders the free Motion of the Eye-lids, and intercepts the Entry of Light into the Eye: but a Collection of Water placed between the Orbit and the Eye thrusts the Eye forwards, and either weakens the Sight, or deprives the Person of it altogether.

167. The two former are so manifest that every one must know them at first Sight; and

(*u*) See an Example of this in *Mis. cur. a. n. c. dec. 3. ann. 3. obs. 3.*

(*w*) *Boerhaave* gives a Case of such Hydatides on the Cornea, which he cured by Puncture. *Prælect. in instit. med. edit. ab. Haller. comment. in sect. 307. instit.*

the

the latter is easily distinguished from the true Hydrophthalmia, in which the Globe of the Eye is distended with Water; but the Marks of an Hydatide must be attended to, in order to judge that it is not some other Kind of incysted Tumor.

168. The Hydatides of the Adnata and Cornea are generally cured by a Puncture or Incision made into them, and by bracing the Parts afterwards with some of the gentle astringent or strengthening Medicines (x); though those of the Cornea often leave a Dimness of Sight.

169. Cysts

(x) R. Pulv. sacchar. saturn. sal. ammon. singul. gr. vi. aq. rosar. simp. unc. xii. m. fiat collyrium.—vel R. Pulv. tut. ppt. drach. i. vitriol. alb. gr. vii. sp. vin. Gallic. drach. ii. aq. rosar. unc. vi. syrup. sacchar. unc. fs. m. pro collyrio.—vel R. Camphor. scrup. i. solve in tantillo ol. oliv. & adde unguent. tutiæ drach. ii. fiat linimentum palpebris affricandum.—vel R. Flor. rosar. rub. drach. vi. coque ex vin. rubr. Gallic. unc. x.

169. Cyfts behind the Orbit are to be treated as directed in Sect. 164; regard being always had to the tender and necessary Organ the Eye, near to which they are situated.

Of the RANULA, or WATERY TUMOR
under the TONGUE.

170. Practitioners have given the Name of Ranula to watery Tumors under the Tongue (y): whether this Sort of Tumor be owing to a Distention of the Duct of the inferior maxillary gland; or be a Sac formed in the cellular Substance by the Spittle escaping from an Opening of that Duct, or some of its small Branches; or an Hydatide from any other Cause,

*ad unc. vi. colaturæ adde acet. opt. spt. vin. Gallic. ana drach.
ii. m. utetur pro fotu.*

(y) See such Tumors described under the Names of *Βατραχος*, Rana, Ranula, and Ranunculus, in *Albucaſis*,
Rhaſis,

Cause; I cannot determine from the Cases I have seen, or the Histories of this Disease that are related by Authors; none of them having been dissected in any Person who died with it upon them (z).

171. The stretching of the Parts under the Tongue makes such Patients uneasy, causes a more than ordinary Flow of Spittle into the Mouth, and renders Deglutition difficult. The Softness and sensible Fluctuation shew a Liquor to be contained, and the Want of previous Inflammation prevents its being mistaken for a Collection of Pus.

Rhasis, Dodoneus, and others.—From the Nature of the Liquor found in such Tumors it may be doubted whether they ought to be considered as dropfical Disorders, however they have the same Appearances, and require nearly the same Treatment as Hydatides.

(z) Calculous Concretions are often discharged when such Tumors are opened; Authors relate many such Cases, and my Brother has several Stones which were lodged in such Sacs.

R 4

172. If

172. If the Tumor is small, the Discussion of it may be attempted by Purgatives (*a*), and the Application of stimulant and astringent Medicines (*b*).

(*a*) In the *French Translation of this Essay* there is one Quotation from the *Mem. de l'Academ. de chirurg. tom. iii. p. 464.* where *Monf. Louis* is said to affirm that this Disease always takes its Rise from an Obliteration of the Excretory Duct of some of the salivary Glands, and that it is only to be cured by keeping open after the Operation, a small fistulous Hole for the Excretion of Spittle into the Mouth.—And another Quotation from the *Journal de Medic. for March 1759*, where *Monf. Soullier* alledges that such Tumors are more certainly cured by the Use of repeated Hydragogue Purges, than by any Operation; he adds that he has cured nine Persons in this Way. I do not know that any other Practitioner has tried this Method of Cure.

(*b*) *R. Cort. granat. herb. hyssop. sal. marin. singul. drach. ii. misce, fiat pulvis tumori applicandus.—vel R. Flor. Balaust. alumin. singul. unc. ss. coque ex aq. fontan. lib. i. ss. ad lib. i. colatura pro lotionē utetur.* Forreſtus says he has cured several with such Medicines, *lib. 14. obs. 29.*

173. But

173. But for the most Part it must be opened to let out the watery or viscid Liquor (c), in doing which Care must be taken not to wound the Vessels situated below the Tongue; —After the Aperture is made a Finger should be pressed along the Course of the sub-maxillary Duct, to thrust out any Substance which may have stopped the Spittle in it; and the Sac is

(c) I have seen three such Cases which were cured by the Operation. *Van Sweiten* was called to see a Woman in *Rotterdam*, who, about nine Weeks before, had accidentally bit her Tongue; a Tumor began soon after to appear below it, between its Root and the Dentes Incisores, and increased to such a Bulk as almost to fill her Mouth, and prevent Deglutition. Both external and internal Medicines had been tried without giving any Relief. He immediately caused the Tumor to be opened, which discharged a great Quantity of a pellucid tough Liquor, and he ordered her to keep an astringent Fomentation in her Mouth for some Days, which completed a Cure in a short Time. *Comment. in sect. 796. vol. ii. p. 641.* My Father met with two such Cases; and Dr. *G. Monro* cured another much in the same Way, but they could not determine either the Seat or the Cause of the Disease.

afterwards,

afterwards to be washed with mild Detergents and Astringents (*d*), taking Care to keep the Orifice of the Incision open, by putting a Probe, or some such Substance, frequently into it.

INCYSTED DROPSIES of the BREAST.

174. Watery Tumors in the Cavity of the Breast, whether formed by the Pleura thrust inwards (*e*), or by Hydatides attached to any of

(*d*) *R. Spirit. vini Gallici unc. i. aq. calcis unc. iv. mel. rosar. fescunc. misce.—vel R. Alumin. scrup. i. solve in aq. rosar. unc. iii. syr. tolut. unc. i.*

(*e*) * * * The following Account was wrote to a Physician in Town, from the Surgeon who attended the Patient. Your Acquaintance Mr. ———, after neglecting a Cold, was attacked with an asthmatic Complaint, attended with the Symptoms of a Hydrops Pectoris, of which he died. His Body was opened. The abdominal Viscera seemed to be sound, but the Lungs of the right Side had the Appearance of a solid Mass, and adhered to the Pleura every where round a Sac which contained a Quart of Water, and seemed to be situated betwixt them and the Pleura,

Upon

of the Viscera (*f*), or in their Substance (*g*), may be called Incysted Dropsies of the Breast.

175. Such

Upon opening the Body of one who died of the Dropsy, a large Collection of green-coloured Water was found between the Pleura, and the Intercostal Muscles and Ribs; the Water had distended the Pleura into such a large Cyst that it filled almost the whole Cavity of the Breast. The Pericardium was likewise full of Water. *Haller. Opuscul. Pathol. obs. 12.*

(*f*) *Rolfinkius* says he has seen Hydatides in the Membranes of the Hearts of People who had been subject to Palpitations. *Bonet Sepulch. Anat. lib. ii. sect. 8. obs. 6.*

(*g*) One of the Invalids at *Paris* was taken with a slow Fever, and such a Difficulty of Breathing, that he was obliged to sleep in an erect Posture, his Hands and Feet swelled, and he made but a small Quantity of Urine, which had a lateritious Sediment. No Noise of fluctuating Liquors could be heard when he breathed. After lingering for three Years he died; and when his Body was opened, there was no Water in the Cavity of the Thorax, but a Cyst full of Water in each Side of the Lungs; the largest was about six Inches long and four broad, and the other about five long and three broad: There was likewise an
Hy-

175. Such Cyfts have no Pathognomic Symptoms by which they may be distinguished from other Tumors and Diseases of the Chest; for the laborious Breathing, and anasarcaous Swellings brought on by their compressing the Lungs and Blood Vessels, may be occasioned by a Variety of other Disorders.

176. If such Tumors are any how discovered, then

a. Where the Water is collected between the Pleura and Intercoastal Muscles and Ribs, an Aperture ought to be made between the

Hydatide about three Inches long on the Surface of the Liver. *Memoir. de l' Acad. des Sciences, 1732, par Mr. Maloet.*—A Burgundian Gentleman laboured for several Years under an Orthopnea and hectic Fever, of which he died. When his Body was opened, there was Water collected in one Side of the Thorax, and the Lungs were filled with Hydatides, which contained a tough pellucid Liquor resembling the White of an Egg. *Bonet. Sepulch. Anat. lib. ii. sect. 1. obs. 36.* — See such another Case, *ibid. sect. 2. obs. 38.*

Ribs

Ribs where the Cyft is fituated, and the Water let out at different Times if it is in large Quantity, and to be treated as directed under Sect. 164:

b. Concerning Vesicles formed in the Substance of the Lungs it may be remarked, that Laughing, Coughing, Sneezing, or Vomiting may burft them; in which Cafe the Water flowing out of them, may be voided into the Bronchi and be coughed up (*b*), or may run in-
to

(*b*) The Baron *Van Sweiten*, in his Commentaries on *Boerhaave's Aphorisms*, *sect.* 1220, quotes two Cafes from *Torgioni Tozzetti* of incyfted watery Tumors of the Lungs burfting, and the Water being evacuated by coughing. The first was a Noblemen fixty Years of Age, who, after being afflicted with afthmatic Complaints, found, one Day, as if something had burft in his Breast, and immediately spit up four Pints of a Liquor refembling the White of an Egg, which relieved his Afthma. He relapsed, and had the fame Accident happen to him in some Time after, but without finding any Relief, and he died. —The other was a young Man, who, after being afflicted with a Weight and Anxiety in his Breast for eight Days,
felt

to the Cavity of the Thorax, from which it may be discharged by making an Aperture into the Cavity of the Thorax, in the Method proposed when we treated of the Dropsy of the Breast.—If a large Cyst is suddenly burst into the Bronchi, the Patient may be suffocated before he can cough up all the Water.

DROPSY of the MEDIASTINUM.

177. Water in the Mediastinum causes an uneasy Sensation of Weight in the Middle of the Breast. This Weight commonly changes Place according to the Situation of the Body ; it is felt near to the Diaphragm in the erect Posture ; it is towards the Spine when the Patient lies on his Back ; it

felt as if something had burst in his Lungs, and in less than an Hour spit up four Pints of a clear viscid Liquor, and recovered. *Prima Riccolta di Osservaz. Medic.* p. 83.

oppresses

oppresses the fore Part of the Breast when he is prone ; it reclines to the Side on which he rests.—As the Oesophagus, Trachea, and Pericardium are placed in the Middle of the Cellular Substance, in which the Water is contained, the Action of these Organs must be affected by this Disease (*i*).

178. This Species of the Dropsy can scarce be distinguished from several other Diseases of

(*i*) *Mead* says he has seen Water collected in the Mediastinum. *Mon. Med. cap. viii.*—A Woman, upon catching Cold, was seized suddenly with a Dyspnea, Weight, and Pain of the Breast, and a Cough, by which she spit up a Phlegm tinged with Blood : These Symptoms were at first relieved by Bleeding, and other Remedies, but on the twenty-first Day after she died suddenly. Her Body was opened, and the Mediastinum found full of a bloody-coloured Serum, which by its Pressure on the Trachea and Lungs seemed to have been the Cause of the Patient's Death. The Lungs were stuffed with a Matter like Pus, and the left Ovarium was about the Size of a small Egg, and of a blackish Colour. *River. Obs. cent. i. obs. 60.*—See another History of the Disease in *Bonet. Sepulchret. Anatom. lib. ii. sect. i. obs. 26.*

the

the Breast, except by the Weight changing Place as above described; but as it always attends the universal Anasarca it increases the Symptoms thereof, and both have the same common Remedies.

179. If this Disease be known, and does not yield to strengthening Medicines and the Evacuations proposed in the former Part of this Treatise, there is no other Way of draining off the Water than by opening the Sternum with a Trepan, which is too dangerous an Operation to be undertaken in a Disease of whose Existence we can have so little Certainty.

HYDROPI CYSTS between the containing Parts of the ABDOMEN.

180. The incysted Dropsy between the Tendons of the oblique and transverse Muscles of the Abdomen, or between these and the Peritoneum

toneum (*k*), has the Appearance of common Hydatides (*l*).

181. The

(*k*) Authors mention Collections of Water between the Coats of the Peritoneum ; but it is a single Membrane, and therefore no Water can be collected in its Substance. The Reason why Authors talk in this Way is, that the firm cellular Membrane on its Outside is commonly, tho' improperly called its outer Coat, and it is in this cellular Membrane that such Collections of Water are formed.

(*l*) The Wife of one *Flinchius*, a Painter, becoming irregular in her menstrual Discharge, her Belly began to swell, and increased to an immense Size, and continued so for seven Years, without any other Inconvenience to the Woman than what was occasioned by the Weight of the Water. When she died and her Body was opened, there were 110 lb. of Water between the Folds of the Peritoneum, which were each of them as thick as one's little Finger. Upon opening the Cavity of the Abdomen the Intestines were found in a sound Condition, but the left Kidney seemed bigger than ordinary, and the Fallopian Tubes were swelled and unperforated. *Tulpii observ. lib. 4. obs. 44.*—See a like Case in *Nuck's Adenograph. Curios. p. 290.*—See Histories of Cysts on the Outside of the Peri-

S

toneum

181. The Cure is to be attempted by the same Means, and the Medicines recommended in

toneum in *Philos. Transf. No. 106 and 207*—in *Mem. de l'acad. des sciences 1707*, and in other Collections.—A great Quantity of Water mixed with Hydatides was collected between the Peritoneum and transverse Muscles, about seven or eight lb. of thick viscid Liquor between the Duplicatures of the Peritoneum; and there was Water also in the Cavity of the Abdomen; for, says he, this is an example where all the three different Sorts of Ascites were complicated. *Medd. monit. med. cap. viii.*—Dr. Camper, Professor of Anatomy at *Franequar*, told me that he once saw a great Quantity of Water collected in the tendinous Sheaths of the recti Muscles of the Abdomen, which were divided into so many Cavities by the tendinous Intersections of those Muscles.—In a Woman who died when six Months gone with Child, and who had complained of great Anxiety about her Precordia, and Difficulty of Breathing, the Peritoneum covering the lower Part of the Diaphragm was distended into a Sac of a surprising Largeness, in which were more than 200 loose Hydatides of different Sizes, swimming in a stinking purulent Liquor. *Aët. phys. med. a. n. c. vol. viii. obs. iii.*—See an Account of a Dropsy between the Duplicatures of the Peritoneum which had been of 44 Years stand-

in the common Ascites are to be given ; but the Methods proposed under β and γ , of Sect. 164. are most to be depended upon. If only a small Puncture is made, or a Pipe is introduced, by which the gross Contents of a Cyst cannot pass, the Orifice ought to be enlarged.

INCYSTED DROPSIES of the BELLY.

182. Hydropic Tumors that project into the Cavity of the Abdomen, whether formed by the Peritoneum thrust inwards, or by Sacs attached to or in the Substance of any of the pendulous Viscera (*m*), have the Name of *Hydrops*

standing, where Saline Chrystals resembling Nitre, some as big as small Hempseeds, others smaller, were found among the hydropic Water. *London medical Observat. and Inquiries, vol. i. p. 7.*

(*m*) Sennertus quotes a Case from Cordæus, where Hyda-

drops Ascites Clausus, or incysted Dropsy of the Belly.

183. When

tides full of a Citron-coloured Water, were found in every Cavity of the Body ; not only in the Abdomen and Thorax, but in the Uterus, Bladder, Kidnies, Pericardium, Liver, Spleen, &c. In short, says he, if the Hydatides had been numbered, there would have been above eight hundred. *Lib. iii. p. 6. cap. iii. sect 2.*—*Ruysch* opened the Body of an elderly Maid whose Belly was much swelled, and full of Hydatides of different Sizes, some as big as one's Fist, and others no larger than a Hazel Nut ; these Hydatides were filled with a viscid glutinous Substance. *Obs. anat. chirurg. obs. 46.*—*Bianchi* mentions the Dissection of a Man's Body, where all the abdominal Viscera, the Liver, Spleen, Mesentery, Pancreas, Kidnies, Intestines, &c. were beset with numerous Hydatides which rose very thick one above another for four or five different Strata. *Hist. Hepat. tom. i. part 2. cap. iii. sect. ii. p. 139.*—*Ruysch* found a large Bag filled with Hydatides placed above the Stomach, in the Body of a Woman who died of asthmatic Complaints : while she lived she had a very difficult Respiration, a constant Fever, and often a Pain in her Stomach. *Obs. anat. chirurg. obs. 27.*—*Blancard* gives an Account of the Dissection of a Woman whose Stomach was greatly distended,

183. When they are not very large they feel like deep seated Hydatides, but when they have

tended, and had numerous Hydatides in its internal Membrane, with a Cyst full of Water depending from the inner Surface of the Pylorus. *Prax. Med. p. 3. cap. vii.*—An old Woman about sixty, was taken with a violent Pain in her Belly, which began to swell, and increased gradually for two Years. When she died, and her Body was opened: The Heart was of a great Size, and had a large Polypus in one of its Ventricles; the Lungs adhered every where to the Pleura; in the Abdomen was found a large Cyst which filled its whole Cavity, and contained about 17 lb. of a yellowish Serum: This Sac seemed to divide the Omentum into two; it had Ligaments and Blood Vessels, and its lower Part adhered to the Sphincter of the Bladder. *Ephemer. German. 1742, obs. 94.*—An ignorant Surgeon intending to perform the Operation of the Empyema, for a supposed Collection of Matter in the Thorax, perforated into the Cavity of the Abdomen in the right Hypochondrium; a Number of Hydatides came out at the Wound, and the Woman died soon after. When *Ruyfch* and he opened the Body, there was nothing preternatural to be observed in the Thorax, but upon looking into the Abdomen, the Liver was every where grown to the Peritoneum,

have once increased so much in Size as to fill the whole Cavity of the Abdomen it is sometimes

toneum, and its whole Substance composed of Hydatides ; *Ruyfch. obs. anat. chirurg. obs. 65.*—In the great Lobe of the Liver *Littre* found a large Cavity, in which there was a Number of oval Bodies that contained a viscous pellucid Liquor. *Hist. de l'acad. des Sciences, 1704.*—*Morand* found in the Body of one of the Invalids at *Paris* two Bags full of Hydatides, which almost filled the whole Pelvis ; one was about eight Inches long and as many broad, and adhered to the Bladder of Urine ; the other was less, and adhered to its Neck. *Mem. de l'acad. des Sciences, 1722.*—A Woman, aged forty-four, sometime after she was married imagined herself with Child ; her Belly swelled gradually : after some Months her Breasts grew full, and she could squeeze a whitish Liquor from them, which confirmed her in the Opinion of her being pregnant. After nine Months were elapsed, having no Signs of Labour, she was sensible of her Mistake, and began to take Medicines ; but to no Purpose, for she languished two Years more and died. Upon opening her Belly to see what her Disease was, *Mr. Turner* found about two Gallons of Water inclosed in a transparent Membrane adhering to the Womb, which upon
Examina-

times difficult to distinguish them from the common Ascites.

184. In such Cases they are only to be discovered by a particular History of the Progress of the Disorder, and a careful Examination of the present Symptoms. In these Hydatides the Swelling is at first confined to a particular Part, where the Patient generally feels an obtuse Pain and Tension.—The Progress of the Disorder is more slow than in the Ascites, and the Swelling extends itself more outwardly.—And the Belly changes its Figure less in the different Movements of the Body where they are fixed; but when the Hydatides are moveable or attached to any

Examination proved to be its outer Coat. *Philosoph. Transf. No. 207.*—See in the *Ephemer. German.* a Case where a Sac adhering to the Womb contained 112 German Measures of Water. *Ann. 1742, obs. 94.*—Another had 88 Measures. *Mis. cur. a. n. c. ann. 8. obs. 23.*

of the pendulous Viscera, they sometimes seem to fall from one Side of the Belly to the other, when the Patient turns in Bed.—The Respiration is not commonly so much affected in walking and going up Stairs as in the Ascites; the Appetite continues better, the Thirst is less; the Face and rest of the Body are not so much emaciated; and the Urine bears a greater Proportion to the Drink, and the Legs do not become œdematous till the Tumor is very large.

In Women the menstrual Discharge continues more regular than in the Ascites; and they sometimes have Children in the Course of the Disorder.

185. When the Peritoneum is the Part distended, the Tumor is always immoveable, whereas the hydropic Cyfts that proceed from the pendulous Viscera fall downwards a little
at

at first when the Patient changes his Posture, but afterwards they either grow so large, or adhere so to the Peritoneum, as no longer to shift their Place.—Sacs in the Substance of the Liver (*n*) or Spleen are not easily distinguished :
numerous

(*n*) Some Years ago a Gentleman 26 Years of Age, was attacked with an Inflammation of his Bowels, which was resolved by Bleeding, Purging, and other cooling Medicines. About six Weeks after he contracted a Cough, which he neglected, till it became very troublesome, and he had the Night Sweats, and all the Symptoms of a confirmed Phthisis Pulmonalis ; he then used variety of Medicines and different Regimens, but without receiving any Benefit ; and he died in about six Months after he was first attacked with the Cough.—For some Time before his Death he could not lie on his left Side ; whenever he attempted it he was seized with a violent Fit of Coughing and Vomiting ; which made us suspect that a large Abscess had formed in the Right Side of the Lungs immediately above the Diaphragm. After his Death, his Body was opened ; the Lungs were full of little Tubercles, many of which had come to Suppuration, but there was no where any large Abscess in either Side of the
Thorax,

numerous small Hydatides dispersed through the Abdomen are discovered with Difficulty, being scarce to be distinguished from Steatoms or such other Tumors, as the Fluctuation of Liquors in them is wholly imperceptible thro' the Teguments and Muscles.

186. Under this Head of the *Ascites Clau-*

Thorax, nor were the Lungs wasted or adhered much to the Pleura. The Abdomen was then opened; the Surgeon on cutting across the Integuments immediately below the short Ribs of the right Side opened a Cyst which discharged a large Quantity of Water; upon dilating the Incision there came out a loose oblong Hydatide, which contained above half a Pint of Liquor. The Water which contained this Hydatide had been collected in a Sac formed behind the Gall Bladder, between the Peritoneum and Liver, which had protruded forwards towards the Integuments. The Sides of this loose Hydatide were made up of a Number of Lamellæ laid one above another, but seemed to have no Vessels nor any organic Structure. We did not observe any of the other abdominal Viscera to be diseased.

sus

fus may be comprehended the Hydatides in the Ovarium, which are particularly described by Authors, but have nothing peculiar to them; nor is it worth while to enter into a Dispute whether they are formed in the Vesicles commonly called Ova, or whether they are only distended Cells of the cellular Substance in which the Ova are lodged (o).

187. The

(o) I have seen several Bodies opened of Women who died of what were called Dropsies of the Ovaria, and in all of them, besides the larger Vesicles which formed a great Part of the Tumor, we observed the Ovarium Fallopian Tube and neighbouring Parts to be swelled, in a steatomatous or schirrhous State, and beset with small Hydatides. —Dr. *Samson* gives an Account of the Dissection of a Woman who died of a Dropsy of the left Ovarium; there was no extravasated Water in the Cavity of the Abdomen, but it was filled with a Number of Vesicles of different Sizes full of a viscous Serum, some so large as to be able to contain 20 lb. of this Liquor, others about the Size of a Child's Head, others as big as an Orange, and others not larger than

187. These incysted Dropsies seldom yield to internal Medicines, and while the Sacs re-

than Walnuts; upon examining these Vesicles they appeared to be no other than the Ovula of the Ovarium distended to that monstrous Size; he says, if you can imagine about forty Bladders of different Sizes tied together like a Reeve of Onions, you have an Idea of this Ovarium; the whole Vesicles contained about 112 lb. of Serum. *Philos. Transf. No. 140.*—In a Woman, who died of a Dropsy, the left Ovarium was swelled to a prodigious Size, so as to weigh thirty-seven pounds; it was divided into a great many Cyfts oddly complicated together; some contained a clear Water, others a gelatinous Liquor, others a Fluid like Cream, others like Tallow. In some Parts it had a glandular, in others, a fleshy Appearance. The Omentum too was thickened and divided into Cyfts that contained different Sorts of Fluids something in the same Manner. The Weight of these Substances pressing on the small Guts had brought on a Gangrene, of which the Patient died in two Days. *Ridley obs. Med. pract. & physiol. obs. 33.*—See Dissections of hydropic Ovaria in *Nuck Adenograph. cap. 8.*—*Philos. Transf. No. 466.*—*Bonet. Sepulch. anat. lib. iii. cap. 21.*—In the Body of a Woman who died of a Dropsy, the right Ovarium was near a Foot long;

remain moveable they scarce admit of any surgical Operation ; unless we were to open the Abdomen and to extirpate them, which is both too dangerous and too severe an Operation for the little Inconvenience they put the Patient to at that Time.

188. When they adhere to the Integuments, become fixed, and point outwardly, they may then be opened (*p*), the Water let out, and they
treated

as much broad, and six Inches thick ; it was composed of a great many small Bags of different Sizes, containing a glairy Matter like Mucilage or Honey, and there was one large Bag which contained near fifty-two Pounds of Water, which appeared to be only the external Covering of the Ovarium, or else one of the Hydatides distended. The Fallopian Tube was lengthened and enlarged in its Diameter. All the other Viscera were found, except the Gall Bladder, which had two Concretions in it. *Medical Essays*, vol. v. art. 73.

(*p*) *Margaret Millar*, after Child-Birth, was seized with
a violent

treated as mentioned in Sect. 164, though we cannot for the most Part, even in such

a violent Pain in her left Side, and her Belly began to swell; after thirteen Years the Tumor was grown to such a monstrous Size that it engrossed the whole left Side, and seemed to point. The great Uneasiness it gave the Patient, joined with her Resolution and Importunities, made *Dr. Houston* resolve to lay the Tumor open; having therefore made an Incision into it about an Inch long, and nothing coming away, he enlarged the Wound two or three Inches more, and then at first only a little glutinous Substance came out of the Orifice, till putting a strong Fir Splinter, with some Lint wrapt round the end of it, into the Wound, he brought away upwards of two Yards of a gelatinous Substance about ten Inches broad; this was followed by nine full Quarts of such Matter as is observed in steatomatous and atheromatous Tumors, in which there was a Number of Hydatides of various Sizes, some of them larger than an Orange. After he had evacuated all the Liquor, he sewed up the Wound, and by the Assistance of proper Dressings and internal strengthening Medicines, the Woman recovered her Health in a few Weeks. From the whole History of the Case the Doctor thinks it pretty evident that it was the Ovarium which was affected.

Philos. Trans. No. 381. sect. 3.

Cases,

Cases, flatter ourselves with the Hopes of a Cure, as such incysted Dropsies often take their Rise from or are accompanied with steatomatous or schirrous Tumors within the Abdomen which cannot be extirpated without immediate Danger of the Patient's Life (q).

HYDROCELE in the SPERMATIC CHORD.

189. An Hydatide in the spermatic Chord, whether it be formed in the common Way of other Hydatides (r), or by Part of the

(q) Mr. *Morand* says he once had a Patient with the Dropsy of the Ovarium, from whom he often drew thirty-six *English* Pints of Water at a Time; the Operation incommoding her so little that she used to go into the Country the Day after it. He proposes here by Way of Question, whether the Extirpation of the Ovarium, when it is drop-sical from hard or schirrous Tumors, might not be safely attempted; as we see every Day Brutes survive the Extirpation of their Ovaria? *Memoir. de l' acad. de chirurgie, vol. ii. p. 458.*

Peritoneum

Peritoneum which formed the Sac of an inguinal Hernia which had been reduced (*s*), is known by the common Marks of such Tumors, and may be distinguished from Collections of Water between the Coats of the Testicle, by the Testicle being still felt at the lower Part of it; whereas in the latter Sort of Hydrocele, the Testicle floating in the surrounding Water cannot be distinctly perceived.

190. This Hydrocele is to be cured as other Hydatides; the Incision being made on the Outside of the Scrotum, as the Part where large Vessels are most certainly avoided, the Water most readily evacuated, and the Dressings easiest applied (*t*).

(*r*) See such Cases in *Garengot Operat. de Chirurg. obs.* 28.—*Saviard obs.* 22.—*Le Dran, obs.* 75.

(*s*) Such Cases may be seen in *Bidloo anat. tab.* 32. fig. 3 & 4.—*Le Dran. obs. reflex. sur l'obs.* 58 & 75.

(*t*) See Histories of such Cures in *Medic. Essays, vol. v.* art. 22.



